

THE U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
PUBLIC HEALTH SERVICE  
CENTERS FOR DISEASE CONTROL AND PREVENTION  
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

convenes the

THIRTY-SEVENTH MEETING

ADVISORY BOARD ON  
RADIATION AND WORKER HEALTH

VOL. I

DAY ONE

ABRWH BOARD MEETING

The verbatim transcript of the  
Meeting of the Advisory Board on Radiation and  
Worker Health held at the Four Points by Sheraton,  
Denver, Colorado, on April 25, 2006.

C O N T E N T S

April 25, 2006

WELCOME AND OPENING COMMENTS	7
DR. PAUL ZIEMER, CHAIR	
SUBCOMMITTEE REPORT: SELECTION OF 5 <sup>TH</sup> AND 6 <sup>TH</sup> ROUNDS OF INDIVIDUAL DOSE RECONSTRUCTION	13
Y-12 SITE PROFILE	20
ROCKY FLATS SITE PROFILE	36
PROCEDURES REVIEWS	54
INDIVIDUAL DOSE RECONSTRUCTION REVIEWS	65
BOARD DISCUSSION	71
BOARD SEC PROCEDURES	102
SC&A SEC TASK UPDATES	115
NON-PRESUMPTIVE CANCERS	153
AMES SEC TASK UPDATE	161
COURT REPORTER'S CERTIFICATE	179

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(By Group, in Alphabetical Order)

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MORMAN, KAREN, DOL  
MORRIS, ROBERT, CHEW AND ASSOC.  
NETON, JIM, NIOSH  
POSEY, ROBERT V., ROCKY FLATS  
RINGEN, KNUT, CPWR  
ROSE, WILMA  
RUTHERFORD, LAVON, NIOSH  
SHEPPARD, BOBBIE, ROCKY FLATS  
STACK, VICTORIA  
TURCIC, PETE, DOL  
ULSH, BRANT, NIOSH

P R O C E E D I N G S

(1:15 p.m.)

WELCOME AND OPENING COMMENTS

DR. PAUL ZIEMER, CHAIR

1     DR. ZIEMER:   Good afternoon, everyone.

2             MS. MUNN:   Good afternoon, Dr. Ziemer.

3             DR. ZIEMER:   Yeah -- I wasn't waiting for a  
4             reply; I was trying to determine whether this  
5             mike was actually on or not.

6             Just prior to lunch I recessed the subcommittee  
7             and I realized that actually what I should have  
8             done is adjourn the subcommittee, and I declare  
9             that the subcommittee is adjourned.

10            This now is the 37th meeting of the Advisory  
11            Board on Radiation and Worker Health.   It's our  
12            second visit as an Advisory Board to Denver.  
13            We're pleased to be here again in this locale.  
14            The Advisory Board members are mainly the same  
15            folks that were here before.   We have -- just a  
16            couple of new members have joined our Board.  
17            Brad Clawson is new on our Board and we're  
18            pleased to have Brad aboard.   Dr. Poston, one  
19            of our new members, is not able to be here  
20            today, nor is Dr. Lockey, who's ill.   But

1           nonetheless, we're all pleased to be here and  
2           to deal with the Rocky Flats petition, as well  
3           as other related items in our meetings today,  
4           tomorrow and Thursday.

5           I'd like to remind all attendees -- Board  
6           members, staff, members of the public -- to  
7           please register your attendance with us in the  
8           registration book in the entryway. Also there  
9           is a sign-up sheet for members of the public  
10          who wish to make public comment.

11          There will be a public comment period tomorrow  
12          evening from 7:00 to 8:30 p.m., so please make  
13          note of that. And if you wish to address the  
14          assembly at that time, please sign up to do so.  
15          We introduced some of the Congressional  
16          delegates that were here from Colorado this  
17          morning. I don't know if others have joined  
18          us. Lew, I'm --

19          **DR. WADE:** I see the two were already  
20          introduced.

21          **DR. ZIEMER:** Yes. Okay, as other -- other  
22          members of the delegation may come later today  
23          or tomorrow and we'll introduce them at the  
24          appropriate time.

25          Lew, do you have any introductory remarks for



1           us, as well?

2           **DR. WADE:** Well, a number. First of all to  
3           thank -- thank the Board for being here and its  
4           diligence. As always I bring you regards from  
5           the Secretary; from the Director of CDC, Dr.  
6           Gerberding; and from John Howard, Director of  
7           NIOSH.

8           I would like to clarify a couple of Board  
9           membership issues, just in case people are  
10          counting noses and establishing whether or not  
11          we have a quorum, and I assume we will have a  
12          quorum for all of our business. We do have two  
13          new members who are fully vested and seated,  
14          Brad Clawson, who is with us, and Dr. Lockey,  
15          who will be with us part of the time by  
16          telephone. He turned up ill on Monday morning  
17          and was not able to join us.

18          Dr. Poston is also making his way towards full  
19          Board membership. He is not at this meeting.  
20          He was never intending to be at this meeting.  
21          This meeting was scheduled before he was  
22          advised of his membership on the Board and he  
23          was not able to make the meeting. Dr. Poston  
24          does not have his waiver completely in place  
25          and therefore he is not a fully seated member

1 of the Board at this point and would not be  
2 counted in our establishing a quorum.

3 Also, Leon Owens has resigned from the Board,  
4 and I was told yesterday by the White House  
5 that I should assume his resignation has been  
6 accepted and he is no longer a member of the  
7 Board.

8 A scheduling issue. The reason the room is  
9 laid out this way is we were told by our  
10 friends with the Colorado Delegation that  
11 tomorrow evening we could expect quite a crowd  
12 possibly, and we want to be able to  
13 accommodate, they thought, up to 250 people.  
14 And I think we can do that in this room the way  
15 it's configured now. We can seat 215. We can  
16 add more chairs as appropriate. I could well  
17 mean that we might have a slightly later night  
18 tomorrow night than the schedule dictates, and  
19 I know Dr. Ziemer has always been gracious in  
20 allowing all that have important comments to  
21 make to make those comments.

22 So a little bit of background on why we are  
23 situated this way and issues of membership of  
24 the Board.

25 We will -- as Dr. Ziemer mentioned, when we

1 discuss certain of the SEC petitions, there are  
2 Board members who are conflicted. They'll be  
3 asked to step away from the table and we will  
4 proceed with our deliberations without those  
5 members present.

6 Those members do not have to remove themselves  
7 from the table when we talk about technical  
8 issues or site profile issues, as we will be  
9 doing some today, and therefore I won't be  
10 asking those members to step back from the  
11 table today. They can't make motions. They  
12 can't vote on motions that relate to the sites  
13 in questions. But I really don't anticipate  
14 there'll be any voting today.

15 So sorry for the long comments, but I think we  
16 need to start clear with everyone. Thank you.

17 **MS. MUNN:** Dr. Wade --

18 **DR. ZIEMER:** Thank you very much. Wanda?

19 **MS. MUNN:** -- you overlooked Mr. Presley's  
20 absence.

21 **DR. WADE:** I'm sorry. Mr. Presley is always  
22 with us, and he just had back surgery and is  
23 probably with us on the phone, and we thank him  
24 for his forbearance in joining us and wish him  
25 speedy recovery. Dr. Melius should be joining

1           us posthaste.

2           **DR. ZIEMER:** Thank you very much. In fact, let  
3 me ask -- Robert Presley, are you on the phone?

4           **MR. PRESLEY:** That's correct, I'm --

5           **DR. ZIEMER:** May -- may not be here at the  
6 moment --

7           **MR. PRESLEY:** Can y'all hear me?

8           **DR. ZIEMER:** -- but he was with us most of the  
9 morning.

10          Board members, you'll notice at the top of the  
11 afternoon agenda again is approval of the  
12 minutes. We'll defer action on any minutes  
13 until Friday, till you've had a chance to both  
14 receive and read them.

15          **DR. WADE:** They are -- they're here. The  
16 minutes for the Board are here, I believe, but  
17 we should delay action until they have a chance  
18 to look at them.

19          **DR. ZIEMER:** But you have just received those  
20 today and --

21          **DR. WADE:** Right.

22          **DR. ZIEMER:** -- and have not -- I'm not sure  
23 that they're actually in the book.

24          **DR. WADE:** Okay.

25          **DR. ZIEMER:** In any event, we're hopeful that

1           those past minutes will get to you before the  
2           week is over and we'll have a chance to act on  
3           them, probably Thursday afternoon.

**SUBCOMMITTEE REPORT: SELECTION OF 5<sup>TH</sup> AND 6<sup>TH</sup>**

**ROUNDS OF INDIVIDUAL DOSE RECONSTRUCTION**

4  
5           All of you were here this morning as part of  
6           the subcommittee deliberations, and you know  
7           that as part of that we made an initial  
8           selection of the next 40 cases to be reviewed  
9           by our contractor, and in turn by us. We  
10          aren't going to formalize that selection just  
11          yet because we agreed this morning that two  
12          things would happen. One is that NIOSH would  
13          try to gain some information about some of the  
14          categories of the so-called matrix that we were  
15          trying to address, and we probably won't have  
16          that information till later in the week. And  
17          secondly, we wanted to allow everyone a chance  
18          to look over the list individually in more  
19          detail.

20          What we did have is an initial list of what we  
21          thought were 40 potential cases that would be  
22          reviewed through the help -- with the help of  
23          our contractor. Lew has provided you with a  
24          summary list, and I only count 39 here, so  
25          there may be one missing. But at the moment

1 I'm -- and we can go back and check our  
2 individual notes -- which one is -- did someone  
3 spot which one is missing?

4 **DR. WADE:** I will double-check -- heads will  
5 roll -- heads will roll over this.

6 **DR. ZIEMER:** But without objection, we will  
7 simply consider this a report from the  
8 subcommittee for this morning's action and we  
9 will have a chance then to formally receive and  
10 take action on these, probably as part of our  
11 Thursday afternoon work session. So without  
12 objection, we will let that stand as the report  
13 on the 5th and 6th rounds of individual dose  
14 reconstruction.

15 **DR. WADE:** I do have a -- some information to  
16 bring to the Board that relates to that topic  
17 if you would allow me.

18 This morning I learned that Sanford Cohen &  
19 Associates has bid on and won a contract to do  
20 dose reconstructions for DTRA at the Nevada  
21 Test Site. As you know, those are dose  
22 reconstructions for people who have non-covered  
23 cancers. People with covered cancers are  
24 compensated. That creates a conflict of  
25 interest situation with regard to Sanford Cohen

1           & Associates as it relates to the Nevada Test  
2           Site. It will come up in two or three areas.  
3           I mean conflicts of interest are a part of the  
4           business we're in. We've all realized that.  
5           But the reason I raise it now is it would be  
6           inappropriate for Sanford Cohen & Associates to  
7           review a dose reconstruction that related to  
8           the Nevada Test Site.

9           That doesn't mean the Board can't select such  
10          dose reconstructions to be reviewed, but they  
11          can't be reviewed by Sanford Cohen &  
12          Associates. The Board could try and develop  
13          another mechanism. The Board could do it  
14          themselves. I put this information in front of  
15          you so you could consider it as you make your  
16          determination on the next round of dose  
17          reconstructions to be reviewed.

18          It will also come into play as it relates to  
19          SEC work. You cannot ask Sanford Cohen &  
20          Associates to review an SEC as it relates to  
21          the Nevada Test Site. And again, I don't know  
22          that you're intending to do that, but it needs  
23          to be on the record that you cannot do that.  
24          Also Sanford Cohen & Associates has completed a  
25          review of the Nevada Test Site site profile.

They did that before they secured this additional contract, therefore that review stands. Any issues to resolve, issue that might exist between NIOSH and that review, would have to take place without Sanford Cohen & Associates involved directly in that. So if the Board was to have a follow-up workgroup meeting to work through the matrix kinds of issues, Sanford Cohen & Associates couldn't be involved in that.

Again, the Board could take up that task itself. We could develop mechanisms for the Board to have additional support, but not with Sanford Cohen & Associates as it related to the Nevada Test Site.

I don't know -- John Mauro, if you're in the audience, if you have anything you'd like to add. I hope I did justice to my explanation.

**DR. MAURO:** Yes, you described it accurately.

We --

DR. ZIEMER: Is that on?

DR. WADE: Not yet.

(Pause)

**DR. MAURO:** How about now? Is that better?

Yes, I would say approximately a month ago SC&A



1           was awarded a contract with DTRA to be part of  
2           several contractors who are doing dose  
3           reconstructions for veterans from both the  
4           Nevada Test Site and the Pacific Proving  
5           Grounds. We have been provided with all of the  
6           protocols that they have developed since I  
7           would say 1978 for performing dose  
8           reconstructions, and right now we are ramping  
9           up with a team -- none of our team members -- a  
10          separate group of individuals are working on  
11          it, but nevertheless, as a company yes, we do  
12          have this contract. The contract goes through  
13          the end of -- of September of this year. It's  
14          basically to help DTRA clear a backlog of cases  
15          that have accumulated and we expect to be  
16          finished with that work by the end of  
17          September. But yes, we are doing dose  
18          reconstructions for veterans at not only Nevada  
19          Test Site, but also the Pacific Proving  
20          Grounds.

21       **DR. WADE:** Okay, thank you, John. I was not  
22       aware of the Pacific Proving Grounds, so my  
23       comments as related to Nevada Test Site will  
24       also apply to Pacific Proving Grounds.

25       **DR. ZIEMER:** Okay.

1           **MR. PRESLEY:** Dr. Wade --

2           **DR. ZIEMER:** And let me --

3           **UNIDENTIFIED:** Hold on.

4           **MR. PRESLEY:** Hey, Paul, this is Bob Presley.

5           **DR. ZIEMER:** Robert, we're having trouble  
6           hearing you.

7           **MR. PRESLEY:** I'm having trouble with you all.  
8           I've been on ever since you all started,  
9           listening, and I'm having trouble for some  
10          reason coming in on the mike.

11          **DR. ZIEMER:** Robert, I'm going to have to ask  
12          you to start over again. I guess the volume  
13          was turned down here. Could you start again?

14          **MR. PRESLEY:** I've been with you since you all  
15          started. There's something wrong with our  
16          intercom system between here and there. I can  
17          hear you beautifully.

18          **DR. ZIEMER:** Yeah, we're hearing you now. Go  
19          ahead.

20          **MR. PRESLEY:** Okay. As Chairman of the working  
21          group, need to kind of talk about this off-line  
22          when we get a chance.

23          **DR. ZIEMER:** Oh, okay. Yeah, thank you for  
24          that comment.

25          I would also like to ask how this affects

1 subcontractors of SC&A; i.e., Salient, which is  
2 part of the support group. Does that affect  
3 them equally?

4 **DR. WADE:** I would say yes, as they have a  
5 business relationship with SC&A. Again, all of  
6 these issues can be reviewed and -- and looked  
7 into in more detail, but my immediate reaction  
8 would be, as Salient has a business  
9 relationship with SC&A, I would see the same  
10 prohibitions applying to Salient.

11 **DR. ZIEMER:** Okay, thank you. Board members,  
12 do you have any questions or comments  
13 concerning that particular issue? And the  
14 implication I think, from John's remarks, is  
15 does -- does the conflict go away even after  
16 the conflict ends? I mean our conflicts of  
17 interest continue on sort of forever. You  
18 know, I was at Y-12 for one week in 1958 and  
19 I'm conflicted. Does it -- so does this carry  
20 past the end of that contract?

21 **DR. WADE:** It could well. I mean, again, we  
22 would have to look --

23 **DR. ZIEMER:** We'll have to examine that.

24 **DR. WADE:** -- at the specific details of it,  
25 but it certainly is an issue that would have to

1 be looked into.

2 Again for the record, let me say that, you  
3 know, conflict of interest are a part of what  
4 we do for all of us. It's a relatively small  
5 world and it's not surprising that conflicts  
6 exist. The important thing is that we  
7 recognize them, we deal with them and we take  
8 appropriate actions, and work goes on, so...

9 **DR. ZIEMER:** And I think that John Mauro  
10 explained that those dose reconstructions are a  
11 different population group at the Test Site.  
12 Isn't that correct? These are the veterans, as  
13 opposed to the civilians, or is that  
14 distinction made?

15 **DR. MAURO:** Absolutely. It only applies to the  
16 veterans. However, at the same time, we have  
17 looked into the matter and there's reason to  
18 believe that there are many civilians that  
19 worked side by side with the veterans. So you  
20 know, make -- that separation is real and --  
21 administratively, but from a physical  
22 perspective, there really -- many of them were  
23 working side by side.

24 **Y-12 SITE PROFILE**

25 **DR. ZIEMER:** Thank you. Okay, let's continue

1           on then in this part of our agenda. We have  
2           the Y-12 site profile and the Rocky Flats site  
3           profile status reports. Mark, you gave us some  
4           preliminary comments on these as part of the  
5           subcommittee deliberations this morning. We  
6           now have I believe the matrices that were  
7           discussed. And Mark, if you'll take us through  
8           the additional comments that you have regarding  
9           these two site profiles. And again, we're  
10          directing this to site profiles, not to the  
11          Special Exposure Cohort petitions per se.

12       **MR. GRIFFON:** Okay. If -- if people have  
13       identified this matrix, it's titled "Y-12 Site  
14       Profile Review, Matrix of priority Issues  
15       potentially relevant to SEC petition review,  
16       prepared by the workgroup" and it should  
17       actually say April 22nd. This is revised as of  
18       April 22nd. It says March 27th right now.

19       **DR. ZIEMER:** So change the date?

20       **MR. GRIFFON:** Right.

21       **DR. ZIEMER:** Okay, Mark is saying to change the  
22       date on that copy that you have to April 22nd.

23       **MR. GRIFFON:** So this -- this reflects the --  
24       the final closeout of actions after we had a  
25       April 20th workgroup conference call. And the

1           -- this again is the site profile issues. On  
2           April 7th we reviewed -- we received the SEC  
3           evaluation report, but we're -- we're  
4           discussing only the -- the issues that were  
5           sort of pre-identified within the site profile  
6           review context here. And I'll just go -- I'll  
7           just go through -- this is very -- fairly short  
8           matrix so I'll just go through some of the  
9           issues and give you a sense of what we -- how  
10          we -- how we moved these issues along.  
11          If you look at Item 1a, Items 1 and 2, they --  
12          this falls under the category of validity of  
13          bioassay data, and on -- in the workgroup  
14          process we had -- we had lengthy discussions  
15          about the -- the -- actually demonstrating that  
16          the data from internal and external, we'll get  
17          to external later, was reliable for the  
18          purposes of dose reconstruction within a  
19          compensation program. And you can see -- these  
20          actions listed 1 through 6 -- these are NIOSH's  
21          final responses to the actions. And if you go  
22          back -- refer back to matrices that I produced  
23          on March 27th and on February 27th, they follow  
24          the workgroup meetings through. So these --  
25          these have evolved as we've worked on these

1 issues and this is sort of the final resolution  
2 as of the last meeting.  
3 Now I -- I would point you to -- to several of  
4 them which -- like number 2 and number 3, at  
5 the -- at the very last line it indicates that  
6 the assess-- for in-- for example, in number --  
7 item number 2, under issue 1a -- I know this  
8 gets a little confusing, these matrices -- but  
9 it indicates the assessment of these issues,  
10 along with documentation of interviews, has  
11 been included within Appendix 1 of the SEC  
12 evaluation report, SEC Number 0028. And the --  
13 the reason for that reference is that that will  
14 be part of -- that's sort of rolled into the  
15 SEC evaluation report and we've also asked SC&A  
16 to help us review that report. So the matrix  
17 is finalized, but it -- it's again going to be  
18 assessed within the review of that evaluation  
19 report. All right? And that -- so the -- the  
20 -- these first items under 1a discuss the CER  
21 bioassay data validation. And most of -- most  
22 of the -- most of what this gets at is the CER  
23 bioassay data is -- is a database data,  
24 electronic database, and this electronic  
25 database, they -- NIOSH has developed models

1           from this to use for their coworker models. So  
2           the question becomes, you know, what is the  
3           pedigree or -- or what is the -- you know, what  
4           is the reliability of that data and have they  
5           checked it against any raw data sources. So in  
6           the process of this -- these meetings that  
7           we've had, NIOSH has gone back and -- and  
8           reviewed -- and I'm not going to summarize  
9           everything here, but they've -- they've looked  
10          for raw data, including in this case some urine  
11          punch cards. They identified health physics  
12          reports they ga-- that were -- that they were  
13          able to cross-walk with the database and  
14          demonstrate reliability. And -- and they had  
15          several different references that they looked  
16          at.

17         Additionally, if you look at number 6, Item  
18         number 6 in this first block at the bottom of  
19         the page, NIOSH pointed out early on in this  
20         process that -- that they had every indication  
21         that the electronic record was accepted by the  
22         Department of Energy as the -- as the official  
23         record, basically. And that suggested, at  
24         least to NIOSH, that -- the -- the implication  
25         there was that DOE had done some sort -- sort



1 of quality review that the program was  
2 effectively capturing and accurately capturing  
3 the data, and that the electronic record was  
4 good enough; they didn't need to maintain punch  
5 cards, et cetera. They never could find the --  
6 the actual DOE communication, but they did find  
7 a secondary reference within a health physics  
8 report, I believe it was, by Hap West, as is  
9 indicated here, which referenced that letter  
10 being transmitted. So -- so they had a number  
11 of sources they looked at to -- to test the  
12 reliability of the bioassay data.

13 And then I can do on here. You'll see several  
14 of these items on the matrix -- the next four,  
15 in fact -- basically after -- we initially had  
16 them on the matrix and then after further  
17 discussions, deliberations, it was basically  
18 decided within the workgroup -- and this is  
19 with -- with SC&A and NIOSH and the workgroup  
20 involved -- that these issues were likely not  
21 SEC issues because they would not preclude the  
22 estimation of a maximum dose under plausible  
23 circumstances. So they -- they still may be a  
24 site profile concern. They still may have some  
25 minor issues, but it doesn't prevent -- these

1 issues wouldn't stand in the way of NIOSH  
2 determining whether there was an SEC class, and  
3 so therefore we dropped it from this -- this  
4 SEC review process and so that's why those are  
5 closed out that way.

6 If we can go on to Item 1b, another big  
7 category -- and these are sort of the big  
8 categories that we ended up discussing within  
9 Y-12 -- is characterized here as other  
10 radionuclides. And in Y-12 primarily a uranium  
11 -- uranium exposures at the site, but in the  
12 course of the site profile review SC&A brought  
13 up several, and I think NIOSH may have self-  
14 identified other radionuclides that -- that  
15 could have been in quantities of significant  
16 concern for exposures that needed to be  
17 addressed within the site profile. And you  
18 know, this included such things as recycled --  
19 the recycled uranium could have had  
20 transuranics as well as fission products in it  
21 so that could have resulted in some exposures.  
22 They also had other radi-- other -- other  
23 operations within the -- the Cyclotron where  
24 they had some work with a laundry list of sort  
25 of exotic radionuclides, albeit, you know,

1           small -- probably small production -- or small  
2           quantities, but they did have that as an  
3           ongoing potential source of exposure, and they  
4           did have some work with plutonium separations  
5           in the very early years. So we're talking --  
6           again, this -- this whole matrix, again -- I --  
7           I didn't say this at the outset, it focuses on  
8           the years '48 through '57 'cause that's sort of  
9           when we're thinking about its SEC-relevant  
10          issues within the site profile, so in those  
11          early years they -- they did do some plutonium  
12          separation work, as well. And -- and so that's  
13          all sort of captured under this category of  
14          other radionuclides.

15         On Number 2 here, and I won't go through  
16         everything in how we've closed out all these  
17         items unless there's really questions, but on  
18         Number 2 you'll see that it was left  
19         highlighted, and I -- since this draft was  
20         created on Saturday, or whenever it was  
21         created, I have talked to -- to NIOSH and they  
22         indicated that on the -- the last conference  
23         call we actually did discuss -- they did  
24         discuss their methodology for performing the  
25         dose reconstructions with regard to these

1           exotics and -- and it's -- it's basically an  
2           approach that they will use on -- on  
3           identifying the data and reviewing the data.  
4           They have specific data related to the  
5           incidents around those exotic exposures. And  
6           they weren't provided necessarily in our  
7           workgroup discussions, some of them, but they -  
8           - but they can be readily pulled from this --  
9           this other database, which we refer to as a  
10          delta view database further down here, so -- so  
11          that was highlighted, meaning that it was still  
12          an outstanding action item but I think we have  
13          that action item provided right now and I would  
14          -- you know, I would say at this point that  
15          that's sort of been provided and is sort of  
16          rolled into our SEC evaluation report  
17          discussions.

18          Moving on to the -- the entire next page  
19          actually -- all those were deemed not issues  
20          that would affect a decision with regard to an  
21          SEC. So it doesn't mean they're completely --  
22          they're -- it doesn't mean they're non-issues,  
23          but it -- it -- in terms of defining an SEC,  
24          they're not relevant.

25          And it -- we go down to the next page, which is

1 external -- external radiation expo-- external  
2 dose concerns. And again Number 1a is again  
3 the validity question, and NIOSH did a similar  
4 track as they did on the internal with the  
5 external radiation records where they tried to  
6 cross-walk raw data sources with the electronic  
7 database to -- to check the reliability of the  
8 data within the database for use in coworker  
9 models. So these coworkers models are -- are -  
10 - actually I guess a -- a -- an important point  
11 here I think for Y-12 is that the coworker  
12 models are going to play an important role  
13 because I think it was up to -- up to 80  
14 percent of the claimants do not have their own  
15 monitoring records so you'll be relying on  
16 coworker models, so it's a -- it's especially  
17 important that -- and I guess that's why we  
18 pursued this so much in the workgroup process  
19 so the -- so these items all relate to either  
20 testing the reliability of the data within the  
21 database or some questions came up with regard  
22 to the coworker model. And -- and the coworker  
23 model and the -- the sort of basis of the  
24 coworker model. I think I'll leave it at that.  
25 Then the next page has again no -- no SEC

1 issues.

2 Did I miss something?

3 **DR. NETON:** Is there a copy?

4 **MR. GRIFFON:** I thought it was.

5 **DR. NETON:** I don't see it there.

6 **MR. GRIFFON:** Maybe LaShawn only made a limited  
7 number, I don't know.

8 **DR. ZIEMER:** Apparently there are copies.  
9 Well, Jim has one.

10 **DR. NETON:** I only have the internal side. I  
11 don't have the external.

12 **MR. GRIFFON:** Oh, okay, sorry about -- there's  
13 more pages.

14 **DR. ZIEMER:** There's more pages -- actually,  
15 how many pages do you have, Jim?

16 **DR. NETON:** I have three pages.

17 **DR. WADE:** It's double-sided.

18 **MR. GRIFFON:** Oh.

19 **DR. ZIEMER:** There should be -- your external  
20 should start on --

21 **MR. GRIFFON:** We're all getting tired, huh?

22 **MS. MUNN:** It starts with the internal.

23 **DR. NETON:** Okay.

24 **MR. GRIFFON:** So then I'm -- I'm down to Item  
25 2a on the matrix and this -- this was the

1 question of -- of whether the -- of badging of  
2 the maximally exposed individuals, and one of  
3 the premises laid out in the coworker model was  
4 that in the early time period the likely  
5 highest exposed workers were monitored. So we  
6 went through a series of steps asking to -- to  
7 verify that or validate that and -- and these  
8 are the actions and -- and you know, again, I  
9 think any -- there's no outstanding actions  
10 here that -- that model is further presented  
11 and elaborated on in the evaluation report, so  
12 we -- we will discuss that more tomorrow  
13 morning, I'm sure, under the SEC evaluation  
14 report review.

15 And I think the last -- 2b is the neutron  
16 coworker models. Am I correct in --

17 **DR. NETON:** Beta.

18 **MR. GRIFFON:** Oh, beta, I'm sorry. I'm getting  
19 Rocky and -- okay. This is the -- the beta  
20 coworker models and during this process  
21 actually NIOSH was in the process, while the  
22 workgroup -- workgroups were ongoing, NIOSH was  
23 in the process of developing and -- and modi--  
24 and fine-tuning a beta coworker model and I  
25 think now it -- it is in final form or draft

1           form or -- it's in final draft form and so that  
2           was -- and also -- also it -- one of our  
3           examples included a -- a -- a dose  
4           reconstruction example that used -- they relied  
5           on that model as some...  
6           And that takes us -- you know, that -- that is  
7           the -- the last item actually is kind of  
8           important 'cause we did ask that -- that sample  
9           dose reconstructions be provided, and really  
10          this is to -- to sort of -- as additional  
11          materials, not really a supplement to the  
12          evaluation report but as sort of supporting  
13          materials to the evaluation report, and this  
14          goes back to our -- our draft policy as a Board  
15          that we -- we asked NIOSH -- as we're doing  
16          this it would be very beneficial to all of us  
17          to see sort of proof of principle, so when we  
18          see a draft -- our sample DR is we're not  
19          talking about full dose reconstructions that  
20          have gone through the whole quality assurance  
21          process and -- and all the T's crossed and I's  
22          dotted, but we wanted proof of principle for  
23          certain key elements of the -- of how they're  
24          going to do dose reconstructions on the full  
25          set of claimants, and that's what we mean by



1 draft DRs, and I think for Y-12, Jim, was it 11  
2 -- nine, nine draft DRs were provided to cover  
3 these different areas of -- of importance that  
4 were identified through the workgroup process.  
5 And that's where we stand on the site profile  
6 review, so -- so again, all these items are  
7 closed out, but several of the final models  
8 that we were getting in the workgroup process  
9 are relied upon in the evaluation report and --  
10 and SC&A did -- did just complete a review of  
11 that report, as well, that we'll be discussing  
12 tomorrow morning, so -- or I think they're  
13 presenting it this afternoon and then we'll  
14 discuss it tomorrow morning.

15 **DR. ZIEMER:** Mark, I assume -- I think the  
16 Board has received this, is my recollection.  
17 There is a larger matrix which contains all the  
18 issues from the site profile review, so this is  
19 a subset of those, the subset that appears to  
20 be most related to the site profile (sic)  
21 issues.

22 **MR. GRIFFON:** Right.

23 **DR. ZIEMER:** Are we confident that in fact  
24 there aren't any site profile (sic) issues on  
25 the main matrix that...

1           **MR. GRIFFON:** Well, this -- this was -- you  
2           know, we -- we --

3           **DR. ZIEMER:** This is sort of consensus between  
4           --

5           **MR. GRIFFON:** Yeah, we -- we had to go --

6           **DR. ZIEMER:** Yeah.

7           **MR. GRIFFON:** -- through this process and --

8           **DR. ZIEMER:** Yeah.

9           **MR. GRIFFON:** -- S -- we asked SC&A to cull  
10          down -- you know, to -- to sort of --

11          **DR. ZIEMER:** Right.

12          **MR. GRIFFON:** -- reduce that list to SEC  
13          issues. They came back to us and really the --  
14          the most intense deliberations of the workgroup  
15          started with this product.

16          **DR. ZIEMER:** Right.

17          **MR. GRIFFON:** But at this point, my feeling is,  
18          you know, we have the evaluation report out  
19          there so any SEC discussions -- you know, the  
20          matrix is no longer driving this process.

21          **DR. ZIEMER:** Right. And so this part of the --  
22          of the site profile review will be helpful in  
23          our deliberations. Tell us quickly where we  
24          stand on the rest of the site profile matrix.  
25          Are there a lot of issues yet to be dealt with?

1           **MR. GRIFFON:** I don't think we stand anywhere.  
2           I -- I -- I mean I don't think it's any further  
3           along than -- than it was when it was first  
4           submitted.

5           **DR. ZIEMER:** That's -- that's remained fairly  
6           static because of this, yes. I just want to  
7           get that in the record so that everybody's  
8           aware that there still is -- for closing out  
9           the site profile, there's a ways to go yet.  
10          Thank you.

11          Board members, any questions on Mark's report?  
12          Yes, Roy DeHart.

13          **DR. DEHART:** Mark, if you would, just remind us  
14          how -- by whom and how you deleted these  
15          particular items, saying whether or not they're  
16          not important in order to -- to go ahead and  
17          continue to look at the SEC. They may  
18          important -- be important otherwise --

19          **MR. GRIFFON:** I mean I think -- I think, you  
20          know, by whom, it was the full workgroup  
21          process. But always when it was deleted, NIOSH  
22          and SC&A had to be in agreement that they --  
23          you know, so there was agreement on both sides  
24          and -- and you know, again, it's not that  
25          they're not important, but they're not driving

1           for -- driving concerns for the SEC decision.

2 DR. DEHART: Right. Right.

3                   **MR. GRIFFON:** For example, you know, a lot of -  
4                   - a lot of -- a lot of the cases I can think of  
5                   is that, you know, if -- if -- how certain  
6                   solubilities were treated, for instance. And  
7                   it may be something that -- that there might  
8                   still be more comments outstanding on, but  
9                   given that they could assume worst case if  
10                  necessary, then it went away. You know, they -  
11                  - they would use a claimant-favorable approach  
12                  if they didn't know any differently, and that  
13                  seemed to satisfy the workgroup and SC&A as far  
14                  as being an SEC issue. So it's -- it's --  
15                  that's just an example. But that's -- every  
16                  one of those items was agreed upon by the  
17                  workgroup and SC&A before we would remove it  
18                  from the matrix.

19 DR. ZIEMER: Thank you. Other comments or  
20 questions?

21	(No responses)
----	----------------

22 Again, this doesn't require any action at the  
23 moment. It's mainly to update you on the  
24 status.

25 ROCKY FLATS SITE PROFILE

1           Let's now address the Rocky Flats matrix. This  
2           one's a little longer. Well, he's going to  
3           tell us how it's not. Anyway, go ahead, Mark.  
4           Does everyone have -- this is -- is it 13  
5           pages?

6           **MR. GRIFFON:** Yeah, 13 -- 13 pages and...  
7           Okay, the -- this again -- take note of the  
8           title. The header is important on all these  
9           matrices, and if you want to really track back  
10          the details, I've got matrices from each -- in  
11          between each workgroup meeting that sort of  
12          show how these items were closed out or where  
13          they stood when we were discussing them. And  
14          I'm -- and -- so -- so I've always referred to  
15          the previous matrix. You know, when -- when we  
16          started I actually tried to do additional  
17          columns, but I realized that I'd have, you know  
18          -- I'd need D-sized paper to put the matrix on  
19          pretty soon so we -- I referred back to the  
20          previous matrix on these items. And the -- the  
21          note on the top that -- that becom-- that comes  
22          important later, but there were -- additional  
23          issues may arise as a result of the review of  
24          the petition and amendments and NIOSH's  
25          evaluation report. And the petitioner in this

1 particular petition for -- Petition Number 0030  
2 actually supplied a -- a fairly voluminous (sic)  
3 report and -- and there was a number of  
4 allegations -- affidavits in there that, you  
5 know, should probably be looked into, but those  
6 were not -- as, again, we started from the site  
7 profile on this process.

8 So going through this quickly, comment number  
9 2, and the reason -- again, the reason it's not  
10 a 1, it's a 2, is -- is that we asked it to be  
11 reduced to SEC items, so likely 1 got dropped  
12 off of the first matrix. Item number 2 talks  
13 about the -- the super S plutonium quest-- a  
14 question whether -- whether and how NIOSH was  
15 going to treat this super S ex-- potential  
16 super S exposures at Rocky Flats, which is a  
17 very insoluble form of plutonium. And in -- in  
18 the process of this workgroup they finalized a  
19 draft of TIB 0049. This -- this draft relies  
20 on -- it actually provides an approach for  
21 dealing with the super S based on some case  
22 data. And in the process of this workgroup  
23 discussions, NIOSH also provided the case data  
24 and USTUR data, which is the uranium -- United  
25 States TransUranium Registry data that was also

1           used in part to sort of check the -- the TIB 49  
2           to -- to validate TIB 49 and -- and in the  
3           process of this workgroup NIOSH provided all  
4           those materials to SC&A and -- and again we  
5           closed out all these items 'cause -- 'cause  
6           NIOSH did present a -- a method -- methodology.  
7           SC&A did have a chance to do preliminary review  
8           of this model and -- and -- and at this point  
9           it's -- it's in final form in the evaluation  
10          report, so you know, any further comments of  
11          that is deferred to the evaluation report, I  
12          think.

13         For -- the next item involves the -- a question  
14         on the americium -- the americium within the  
15         plutonium mix and how -- what assumptions were  
16         going to be made with regard to the amount of  
17         americium when people were exposed to the  
18         plutonium and again NIOSH provided background  
19         material indicating how this was handled at the  
20         site and their rationale for the assumptions  
21         they made in the TBD. In discussing this  
22         issue, we -- a secondary issue was -- came out  
23         of the workgroup, which was direct exposures to  
24         americium. So the -- the first point that  
25         we're making is that we're -- we're trying to

1 figure out how -- it -- it's really they're  
2 using americium from the lung counts to back-  
3 calculate the amounts of plutonium that a  
4 person inhaled. And in Item Number 2 we  
5 realized that there could have been some --  
6 some people that were directly exposed to  
7 americium 'cause they had an americium  
8 separation operation. So in that case you'd be  
9 more concerned about americium exposures than -  
10 - than americium as a way to calculate the  
11 plutonium. So there were two separate items,  
12 both of them NIOSH presented methodologies on.  
13 At this point, again, they're deferred to the  
14 evaluation report.

15 Item 6 and Item 7 relate to the methodology for  
16 neutron dose reconstruction at the Rocky Flats  
17 site, and for this Item 6 NIOSH provided that  
18 there -- the coworker method and -- and TIB 50,  
19 which I think is in -- again, in final draft  
20 form at this point, was provided. TIB 50  
21 outlines the coworker approach for neutron dose  
22 reconstruction, and it has -- it has quite a  
23 few twists and turns, I think. You know,  
24 different periods of time they're -- they're  
25 using different approaches, so there's some



1           nuance in here that -- that -- that's not a --  
2           you know, obviously not captured in a little  
3           matrix item like this, but that's one thing we  
4           want -- we -- we examined on the Board and,  
5           again, the full approach is, you know, any  
6           outstanding items -- any -- any further  
7           discussion on this issue is -- is deferred to  
8           the review report of the evaluation report.  
9           Item 9 -- Item 9 is -- is the -- is actually a  
10          preliminary item that talks about data  
11          integrity related to the Rocky Flats site. And  
12          this was actually -- it became a very large  
13          part of our discussions for the Rocky Flats  
14          workgroup calls. Several -- you can see  
15          several action items down here related to data  
16          integrity and/or sort of this validation of  
17          data that I described for -- a similar --  
18          similar thing that we described for Y-12, the  
19          question of whether the electronic database  
20          could -- could -- basically refl-- reflected  
21          the raw data, so they had to check the  
22          reliability of the electronic database. NIOSH  
23          did state that for Rocky Flats the -- when I  
24          mentioned before, Y-12, 80 percent of the cases  
25          would rely on a coworker model. For Rocky

1 Flats they've indicated that it's a very small  
2 percentage of the cases so far found that would  
3 use coworker models, so none-- nonetheless,  
4 it's still not a -- we still pursue this  
5 because it's not clear -- at least for me it's  
6 not clear, and this -- I apologize 'cause we've  
7 been in the process of non-stop workgroup  
8 meetings for the last month or so, but it -- it  
9 -- at least in my mind it's still a little  
10 unclear as to what the claimant's records  
11 contain, whether it -- if they have raw urine  
12 cards or if they have printouts from a  
13 database. If they're -- obviously if they're  
14 printouts from a database, the same question  
15 remains about reliability against the raw --  
16 comparison against the raw data. The printout  
17 from the database is obviously going to match  
18 up nicely with the database, we would -- we  
19 would assume. So that -- that issue may not  
20 completely go away just 'cause you're not  
21 relying on coworker models.

22 Item Number 5 I think on this list -- on the  
23 right side there gets into some of the concerns  
24 that -- that have come up about the practice of  
25 recording zeroes when the badges were not

1           turned in and, you know, we've heard this term  
2           -- I think from the petitioners, as well, the  
3           concern about zeroing the dose. And this -- a  
4           lot of this data integrity -- a lot of these  
5           data integrity issues and, to some extent, the  
6           elec-- the check of the reliability of those  
7           electronic records, remain for this evaluation  
8           report. A lot of those -- and I will cut this  
9           off at Item Number -- or Issue Number 11 on our  
10          matrix, and you'll be happy about that, aft--  
11          after Issue Number 11, all -- I believe every  
12          one, and I may -- I may have to check this, but  
13          I believe every one of those issues relates to  
14          data integrity, and many of those issues were  
15          derived from the petition itself. Some were  
16          from SC&A's follow-up from some of the  
17          petitionary allegations, but they all revolve  
18          around this question of data integrity. And I  
19          think, especially where the petition -- you  
20          know, has several affidavits on -- on the  
21          concern and lengthy amounts of material  
22          discussing this concern, we thought it's  
23          necessary from the evaluation report -- or from  
24          the SEC review point of view to look into those  
25          and follow up on those in depth. All -- I

1 think that's best saved for the discussion of  
2 the Rocky Flats petition, which we'll do  
3 Thursday morning, so I'm not going to go  
4 through the rest of the matrix after -- after  
5 Item -- after Item 11.  
6 And I skipped ahead a little bit. Item 10 was  
7 a question about this -- this -- what's called  
8 roll-up data, and this -- this gets into a  
9 little bit of the thing I described earlier.  
10 It's -- it's related to neutron -- well, I  
11 guess and -- and photon exposures in this case,  
12 but for a time period at the site they -- the  
13 electronic data -- within the electronic  
14 database the records were rolled into one  
15 penetrating dose and -- and NIOSH, for the IREP  
16 calculations for the probability of causation  
17 calculations needs -- needs to separate out  
18 photon and neutron exposures, and they've  
19 provided a meth-- a methodology within -- I  
20 think it's within TIB 50 still -- within TIB 50  
21 to sort of deconvolute those results and  
22 provide neutron and photon doses separately and  
23 -- and that's what's described here.  
24 And then Item 11 is -- oh, Item 11 was a very  
25 specific question about -- related to a neutron

1           algorithm, so it's a similar neutron dose  
2           question and I think, again, this specific one  
3           was closed out but the overall neutron coworker  
4           model will remain a discussion within the SEC  
5           evaluation report review.

6           And I -- I think that's it. Again, with --  
7           with -- through the rest of the matrix I won't  
8           -- I won't go through all those items. A lot  
9           of them relate to -- I think all of them relate  
10          to data integrity. I will note that in -- in  
11          there I have tried to shade or highlight -- and  
12          on this it appears as a gray shaded area --  
13          items that were -- that -- that were not  
14          completely resolved in our workgroup process.  
15          Responses were provided by NIOSH, but I think  
16          there -- they certainly remain as an issue to  
17          be pulled into the SEC review discussion and I  
18          -- I -- I don't think we need to go through  
19          those, but you might want to look at those as  
20          you're reviewing this tonight.

21          **DR. ZIEMER:** Thank you, Mark. Questions? As I  
22          understood it, 12 and all the way through to  
23          the end are data integrity issues. Is that  
24          right, 12 through the end?

25          **MR. GRIFFON:** Yes, data integrity issues.

1           There may be a few that -- that -- that are  
2           sort of, you know, maybe not completely data  
3           integrity issues, but they all either came out  
4           of the petition -- allegations by the petition,  
5           and most of those were related to data  
6           integrity, so...

7           **DR. ZIEMER:** Wanda?

8           **MS. MUNN:** Just one comment. Some of those  
9           data integrity questions were an issue that  
10          involve that one prove a negative, that you --  
11          that you prove that something did not happen as  
12          opposed to something did happen. And for that  
13          reason, from some viewpoints it might be  
14          impossible to resolve them completely and for  
15          all time. It seems -- it seems that one of the  
16          biggest hurdles that some of us had in the  
17          working group was the issue of how much is  
18          enough in terms of ascertaining how much truth  
19          can be derived from the records that we have.  
20          And that, I think, is the ultimate question  
21          with all of these integrity issues, and one  
22          that is never going to be resolved to 100  
23          percent certainty, especially when we're  
24          talking about trying to prove a negative. So I  
25          think it is incumbent upon the Board to come to

1 grips with that specific issue, how much is  
2 enough, in accordance with the wording of the  
3 law, which I believe is fairly clear that it  
4 needs to be sufficient. So I -- I -- the  
5 toughest thing, I believe, is going to be our  
6 decision about what is sufficient.

7 **MR. GRIFFON:** And I mean we -- we'll have more  
8 discussion on this when we look at the SEC, but  
9 -- but you know, some things -- discussions  
10 that we had in the workgroup was that -- and --  
11 and actually the actions that we described, if  
12 you looked at these highlighted actions,  
13 especially the -- the last three are really  
14 worth looking at, 30 -- 30, 31 and 32 are --  
15 are really -- are -- are -- are new action  
16 items as of the last meeting, I believe, and  
17 these came out of SC&A sort of consolidating  
18 some of these data integrity issues. And what  
19 we -- the way I tr-- we tried to word the  
20 actions was -- was to reflect sort of what --  
21 what Wanda said, which is that, you know, we  
22 want NIOSH to attempt to go back and track  
23 these issues back, but we understand totally  
24 that we may end up with a inconclusive result,  
25 so they -- they track it to the extent they

1           can, understanding that if they get to certain  
2           raw records, it still may be ambiguous for --  
3           for ex-- you know, I guess the -- the one  
4           example I can think of is that there were  
5           claims that people worked in certain hot jobs  
6           and their doses weren't recorded accurately  
7           during those time periods when they worked a  
8           hot job. Well, if you look in the database and  
9           they have records there, then if you go back to  
10          log books and you see exposure rate  
11          measurements that are high, you don't -- you  
12          still don't necessarily know if the worker was,  
13          you know, near where those surveys were done,  
14          you know, so you still may be inconclusive.  
15          But -- but we asked them to track back to the  
16          extent they could because there were reports  
17          that some of these log books and some of these  
18          documents contained at least secondary sort of  
19          dosimetry, so we asked -- again, we asked NIOSH  
20          to track back, to the extent they could,  
21          understanding that we may get a result back  
22          that says, you know, we weren't able to  
23          conclude either way or, you know -- and then --  
24          and then we still do have that remaining  
25          question of how much is enough when we're



1 looking at this reliability.

2 **MS. MUNN:** And the one other point I'd like to  
3 make is with regard to the coworker data. I'd  
4 like to re-emphasize what Mark said when he  
5 pointed out that the number of cases that would  
6 be involved in the Rocky Flats petition that  
7 would require coworker data is very small  
8 indeed -- if memory serves, less than one  
9 percent of the total --

10 **MR. GRIFFON:** And I think I -- I think I -- I -  
11 - I carefully worded that when I said it,  
12 'cause I said NIOSH stated that a very small  
13 percentage -- and I must say, as I was putting  
14 together the status report for Thursday  
15 morning's meeting I have -- I have some  
16 questions as to what exactly is meant by a  
17 coworker model and what's not meant by a  
18 coworker model 'cause seems to me for a lot of  
19 -- for many of the neutron doses they may rely  
20 on coworker adjustment factors, and I don't  
21 know if that's considered a coworker model or -  
22 - I have some questions there, you know, but  
23 that was -- that was stated, that it was a very  
24 small percentage. I don't know, we might want  
25 clarification and this might not be the time

1           for it. Might be -- Brant wants to speak to --  
2       **DR. ULSH:** Is this on? Okay. What we're aware  
3       of right now, we've had about 1,100, give or  
4       take, cases referred to NIOSH from DOL for  
5       Rocky Flats. We've completed approximately 700  
6       of those cases and we currently have two cases  
7       on hold for coworker data, so it is a pretty  
8       small number.

9       Mark, what you're referring to with the neutron  
10      coworker data I think refers to the neutron-to-  
11      gamma ratios that were calculated as part of  
12      the NDRP that will then be applied to workers  
13      who were not explicitly monitored for neutrons.  
14      So --

15      **MR. GRIFFON:** Right.

16      **DR. ULSH:** -- I don't know if you want to -- if  
17      you define that as a coworker model or not, but  
18      it's not -- it's not a coworker model --

19      **MR. GRIFFON:** Yeah, that -- that -- that's what  
20      I was thinking of, especially since the NDRP  
21      report -- I mean I think we -- we heard that  
22      the NDRP report -- the NTA film program in the  
23      early years was -- was intended to monitor the  
24      most highly exposed workers for neu-- or the  
25      most likely high exposed workers for neutron

1 exposures, but in the -- in the summary report  
2 they do admit that -- for instance, Building  
3 771 was not included for the most part, or only  
4 -- only some workers were included from that  
5 building, and they -- they do admit that that  
6 was a high source of neutron exposures. So  
7 then somehow you ha-- I think you have to rely  
8 on coworker -- and that's what -- different  
9 time periods rely on different elements for  
10 neutron calculations, so that's why I'm not  
11 definitively saying this. I'm -- I'm saying I  
12 still have a question on it --

13 **DR. ULSH:** No, I understand, it --

14 **MR. GRIFFON:** -- as to whether that was a  
15 coworker approach used to calculate their  
16 doses, and if any of those were in your  
17 claimants then I would consider that at least  
18 in part coworker -- you know, part of their  
19 dose reconstruction involved use of a coworker  
20 model, so --

21 **DR. ULSH:** Yeah, there were different time  
22 periods, as laid out in the NDRP, where they  
23 did -- they used different methodologies to  
24 reconstruct the neutron doses up to -- I think  
25 the NDRP covered up to the end of 1969, and

1           that was the end of the NTA film era. After  
2           that they used thermoluminescent dosimeters to  
3           measure neutron. And one of the methods that  
4           they used in the NDRP was in fact what you  
5           said, the neutron-to-gamma ratio. And so  
6           you're right that the ratios that were  
7           calculated as part of that NDRP would be  
8           applied to other individuals, you know, as  
9           appropriate. But yeah, we'll probably have to  
10          revisit that in a -- in a working group  
11          meeting, I suspect.

12       **MR. GRIFFON:** And -- and the other -- I think  
13          the other time period is '70 to '76. I don't  
14          think the TLDs started till after '76.

15       **DR. ULSH:** No, they actually started in 1970,  
16          and from '70 to '76 you had the combined --

17       **MR. GRIFFON:** That's it.

18       **DR. ULSH:** -- the combined issue that you  
19          mentioned earlier, so -- is -- is that --

20       **MR. GRIFFON:** Clear as mud for all.

21       **DR. ULSH:** Clear as mud, okay.

22       **MR. GRIFFON:** I mean that's why I'm saying  
23          there's different methods over -- over the  
24          course of time for that.

25       **DR. ULSH:** Yes.

1           **MR. GRIFFON:** Some at least relied on coworker  
2           --

3           **DR. ULSH:** Ratios.

4           **MR. GRIFFON:** -- factors or coworker --

5           **DR. ULSH:** Yes.

6           **MR. GRIFFON:** -- ratios. Right?

7           **DR. ULSH:** That is true, yes.

8           **MR. GRIFFON:** So...

9           **DR. ZIEMER:** Okay, thank you. Other comments,  
10          questions?

11                               (No responses)

12          So I -- okay, a comment, Lew?

13          **DR. WADE:** No --

14          **DR. ZIEMER:** No?

15          **DR. WADE:** -- in terms of if we're done with  
16          that issue, then the two issues we carried over  
17          from this morning.

18          **DR. ZIEMER:** Right. Well, again, this doesn't  
19          require action at this point. It really  
20          updates us as to where they are in terms of --  
21          of the site profile issues that may impact on  
22          the SEC, so --

23          **MR. GRIFFON:** I think we have the same status  
24          on the --

25          **DR. ZIEMER:** On the rest of the --

1           **MR. GRIFFON:**  -- overall site profile issues  
2           that is -- is that there is no status.  I mean  
3           we -- that is still outstanding, so --

4 DR. ZIEMER: The rest of the issues remain on  
5 the back burner.

6 MR. GRIFFON: Right.

7 | DR. ZIEMER: Thank you very much.

8                   **DR. WADE:** Now we have the two issues from this  
9                   morning, the -- the --

10	(Pause)
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11 DR. ZIEMER: Yeah, the Chair wants to -- this  
12 is a reminder to remind everybody to turn off  
13 their cell phone.

14 DR. WADE: Well done. Very well done.

15 DR. ZIEMER: Perfect timing. It's probably my  
16 wife or something.

17	PROCEDURES REVIEWS
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18 **DR. WADE:** We have the two issues from this  
19 morning, the procedures matrix that's now in  
20 front of us and then the findings on the second  
21 20 individual dose reconstructions. We now  
22 have those materials.

23 DR. ZIEMER: Right. The procedures matrix is  
24 entitled "Summary of Task III Procedure  
25 Findings Matrix" prepared by workgroup April

1 22nd, 2006.

2 **MR. GRIFFON:** That was a busy day.

3 **DR. ZIEMER:** Right. Now Mark, this morning you  
4 actually summarized pretty much where we were  
5 on this. Are there any additional comments  
6 that need to be made that -- we didn't have  
7 this final version before us, but our  
8 recollection is that the -- the Board actions  
9 are indicated in every case. There are some  
10 that will require follow-up, but --

11 **MR. GRIFFON:** I think it might be a good time -  
12 - it might be a good time to call Stu -- Stu,  
13 you talked about a tracking mechanism that we -  
14 - 'cause part of what we have here is in the  
15 Board actions. A lot of times they're  
16 deferred, that NIOSH will correct this, it's a  
17 -- whether it may be a low priority, high  
18 priority. Sometimes you'll see some action --

19 **DR. ZIEMER:** Statements like NIOSH will  
20 evaluate further, which kind of leaves it  
21 hanging.

22 **MR. GRIFFON:** Yeah, there are other actions  
23 here, that SC&A will review, so they might have  
24 replaced a procedure with a new ver-- a new  
25 procedure, and SC&A is doing another set of

1           procedures reviews, so we state in here that  
2           SC&A is reviewing the next -- the next  
3           procedure in the line.

4           **MR. HINNEFELD:** Right.

5           **MR. GRIFFON:** So some of these, you know, we're  
6           moving the ball down the road here, but we  
7           don't want to lose track of these actions. So  
8           Stu had a --

9           **MR. HINNEFELD:** Well, I've got an idea about  
10          how to -- how to keep track of the various  
11          actions that come out of these reviews, and  
12          what I -- what I would suggest is that we  
13          establish essentially an action for -- where we  
14          have committed or whether it's the -- the  
15          Board's action is recommends that NIOSH do  
16          something, whether it be amend a site profile  
17          or revise a procedure or something. We would  
18          capture that as an action item, give it the  
19          same number as the dose reconstruction number  
20          and finding. Like 1.1 would be the first  
21          finding of DR number one. Provide that action  
22          number and a name and sort of put in one last  
23          column in the matrix and then kind of leave the  
24          matrix alone after that, once we've identified  
25          the action. And then on some other -- some



1           other vehicle -- you know, to get away from  
2           these big things, some other vehicle track  
3           progress toward the completing of the promised  
4           action. So you know, whether that would be on  
5           a Gant chart or just a status report  
6           periodically that we could, you know, update  
7           regularly as -- as progress is made. So it  
8           kind of addresses our obligation to keep track  
9           of the things, you know, what comes of these.  
10          And I guess the only remaining question then is  
11          as we take these actions -- as, you know, we  
12          take an action that we believe fulfills the  
13          intent, is there someone who's going to say yes  
14          -- I mean will the Board say yes, we agree your  
15          action fulfills the intent, or -- or what's the  
16          -- that -- that question, that yes, we did it  
17          right sort of question.

18       **DR. ZIEMER:** Stu, this -- this can be kind of a  
19       non-ending exercise.

20       **MR. HINNEFELD:** I hear you.

21       **DR. ZIEMER:** If it says something such as NIOSH  
22       will modify the procedure, it would seem to the  
23       Chair that once you've done that, you report  
24       it, the issue is closed. Now it's true at that  
25       point there's a modified procedure out there,

1 but we also have an ongoing obligation to -- as  
2 we move ahead to review new procedures, revised  
3 procedures. So basically, in my view, that  
4 puts it back in the population of things that  
5 may be -- may or may not be addressed at some  
6 future time. But it -- it brings closure to  
7 the immediate thing.

8 **MR. HINNEFELD:** Okay.

9 **DR. ZIEMER:** Otherwise you -- otherwise you say  
10 okay, they'll revise it. Then do we have to  
11 approve the revision, does SEC -- or SEC, SC&A  
12 review it on our behalf? It just goes on and  
13 on and on. We need to be able to come to  
14 closure on -- on these things and I think if  
15 you do the action that's stated, that should  
16 close it. Whether or not it's the right action  
17 remains to be seen.

18 **MR. HINNEFELD:** Okay.

19 **DR. ZIEMER:** I mean of course it's always the  
20 right action, but whether we like it or not is  
21 the...

22 **MR. HINNEFELD:** Okay.

23 **MR. GRIFFON:** With the -- with this -- with the  
24 procedures review specifically I think the way  
25 we tried to handle that is that if we saw -- if

1 we felt that it was going to be large changes  
2 or -- or was a ver-- you know, quite different  
3 procedure that was going to be in place, we  
4 tasked SC&A with reviewing --

5 **MR. HINNEFELD:** Yes.

6 **MR. GRIFFON:** -- it anyway.

7 **MR. HINNEFELD:** Yes.

8 **MR. GRIFFON:** So we kind of captured that, and  
9 on these other ones, like IG-1 and IG-2 --

10 **MR. HINNEFELD:** Uh-huh.

11 **MR. GRIFFON:** -- I think what -- you know, a  
12 lot of it was editorial and style, you know,  
13 and I think that -- I agree with Paul that we -  
14 - you know, we would close that out and --

15 **DR. ZIEMER:** Yeah, some of -- some of these  
16 were the procedure could be written more  
17 clearly.

18 **MR. HINNEFELD:** Uh-huh.

19 **MR. GRIFFON:** Right.

20 **DR. ZIEMER:** You know, well, okay, you rewrite  
21 it and is it more clear? Someone could decide  
22 that later, but at least you've done your task  
23 at that point.

24 **MR. HINNEFELD:** Okay.

25 **MR. GRIFFON:** Can -- I was going to ask, can

1           you -- is it possible maybe that by next Board  
2           meeting you can provide this vehicle to us or  
3           its -- a sample of it that --

4           **MR. HINNEFELD:** Yes.

5           **MR. GRIFFON:** -- we can see how you're going to  
6           do this and how --

7           **MR. HINNEFELD:** Yeah, that was my -- my intent.

8           **DR. ZIEMER:** Okay.

9           **MR. GRIFFON:** That would be good.

10          **DR. ZIEMER:** We'll look forward to receiving  
11          that then. Yes, Roy.

12          **DR. DEHART:** I was wondering, as a point of  
13          clarification, on the action that NIOSH is  
14          taking to indicate what the action is, who the  
15          action's to be conducted by and a suspense date  
16          -- a suspense date as the last...

17          **MR. HINNEFELD:** Well, I -- I can provide a  
18          scheduled date. I mean -- are you talking  
19          about a date -- a completion date?

20          **DR. DEHART:** A completion date for that item in  
21          the matrix --

22          **MR. HINNEFELD:** Recognize that --

23          **DR. ZIEMER:** You mean an anticipated --

24          **DR. DEHART:** Exactly.

25          **DR. ZIEMER:** Yeah.

1           **MR. HINNEFELD:** The -- I think so. I don't  
2 know by next Board meeting.

3           **DR. ZIEMER:** Yeah, well, let's consider that as  
4 --

5           **MR. HINNEFELD:** The reason I say that is --

6           **DR. ZIEMER:** -- a possible...

7           **MR. HINNEFELD:** The resources that do these  
8 fixes are the same resources that do the -- the  
9 SEC petition evaluations and the dose  
10 reconstructions and -- and all the other tasks  
11 that we're doing.

12          **DR. ZIEMER:** And I think we --

13          **MR. GRIFFON:** At least have it as a maybe, you  
14 know, yeah.

15          **DR. ZIEMER:** Well, we already agreed that many  
16 of these were low priority, and you would do  
17 them on an ad hoc basis as you were able to,  
18 that we weren't going to sweat them, and I  
19 think you could indicate on the matrix if it's  
20 a low priority item that, you know, the fix --  
21 we know how to use the item. It wasn't worded  
22 so well, but it's still useable. If you say  
23 we're going to do this in a year, I think we're  
24 all right with that, whatever it is. Right?

25          **MR. HINNEFELD:** Okay. Certainly if you put a

1           date -- if you put a scheduled date on  
2           something, it's more likely to get done than if  
3           you don't put a scheduled date on it. That is  
4           certainly true.

5           **DR. ZIEMER:** Yeah. But it doesn't have to be -  
6           - you've got to look at it in terms of what the  
7           real urgency is and is there a real need to do  
8           this right away.

9           **MR. HINNEFELD:** I think with flexibility on  
10          those dates -- I mean feeling like if a date  
11          slides past and it didn't get done, with that  
12          understanding that dates may have to be  
13          adjusted based on manpower loading on other  
14          tasks, along with that understanding, I have no  
15          real problem with it.

16          **DR. ZIEMER:** I think it's a living document  
17          itself and you're -- you're going to update us  
18          on a regular basis and -- and here's the  
19          changes.

20          **MR. HINNEFELD:** Okay. Wanda?

21          **MS. MUNN:** Although we all recognize we have to  
22          stay flexible with respect to some of these  
23          procedures, it is very desirable for everyone  
24          concerned to really put a period at the end of  
25          as many of these as we possibly can. As a

1           simple process, might it be reasonable for us  
2           to -- once NIOSH has put together the list for  
3           us so we know what the list is, then as those  
4           things are addressed, perhaps they could advise  
5           the Board that they have been addressed by  
6           electronic means, so that at the next Board we  
7           will have had an opportunity to look at the  
8           revised procedure and we can then, as a Board,  
9           actually act on what has transpired on these  
10          action items if there is an action that's  
11          necessary. Is that a reasonable process, Stu?

12       **MR. HINNEFELD:** I think so. I can provide the  
13       Board what -- whatever it -- when we finish a  
14       product I can provide the Board with whatever -  
15       -

16       **DR. ZIEMER:** If you modify something, a  
17       procedure in some way as directed in the matrix  
18       --

19       **MR. HINNEFELD:** Uh-huh.

20       **DR. ZIEMER:** -- if we're provided with that --  
21       is what you're asking. Right?

22       **MS. MUNN:** Yeah.

23       **MR. HINNEFELD:** Just tell you that it's been  
24       revised or send you the revised --

25       **MS. MUNN:** Tell us it's been revised so that we

1           can go look at it ourself and -- and then when  
2           we have our next Board meeting, when you give  
3           us our report then on what's been done, we will  
4           already have seen the updated procedure, and if  
5           we have some concerns we can express that at  
6           that time.

7           **MR. HINNEFELD:** Okay, sure.

8           **DR. ZIEMER:** We'll give that a try, at least.

9           **MR. GRIFFON:** The other thing I would offer is  
10          since I think we're going to try to close out  
11          the procedures review and the second set of  
12          cases and the third set of cases for the next  
13          Board meeting, and I -- I -- just glancing  
14          through again, not that I haven't looked at  
15          this matrix enough, but looking at the Board  
16          actions with this in mind, I think there's some  
17          that -- that we can fine-turn the wording on  
18          the action so that it's not a -- sort of open-  
19          ended, so I will work with -- with NIOSH and  
20          SC&A on just one final crack at a few of those  
21          final action items so that they're something  
22          that has more of a period at the end of the  
23          sentence.

24          **MR. HINNEFELD:** Okay.

25          **DR. ZIEMER:** Any other comments on this Task



1           III matrix?

2                       (No responses)

3           Then we'll take it by consent that the attempt  
4           to do the tracking on closures will occur, and  
5           basically that will bring this to a final  
6           version with -- with Mark's final editing.

7           Okay.

8           **INDIVIDUAL DOSE RECONSTRUCTION REVIEWS**

9           **DR. WADE:** Next we have the second 20 DRs.

10          **MR. GRIFFON:** Second.

11          **DR. ZIEMER:** Now we have the matrix on dose  
12          reconstruction findings for cases 21 through  
13          38. You'll remember that was -- originally was  
14          21 to 40, but there were two cases that I think  
15          were removed from the final decision list or  
16          something, I forget. So they lost their  
17          eligibility for being considered so we ended up  
18          with 18. There were 18 cases. So the matrix  
19          for those has been distributed. It's a 29-page  
20          matrix. We're not going to go through the  
21          items individually, but Mark, again, you want  
22          to summarize or make any statements on this?

23          **MR. GRIFFON:** Yeah, there -- there's -- again,  
24          we'll try our best to clo-- to make these  
25          resolutions sort of more definitive and have a

1           period at the end of them. There are some in  
2           here, for instance, where we -- NIOSH indicated  
3           that they were going to re-evaluate the case so  
4           they -- it became, you know, a whole new review  
5           of the case. I think that also implies that  
6           SC&A would then look at their re-evaluation.  
7           There -- there are also -- and -- and you'll  
8           see in some of the ones -- page -- I'm trying  
9           to find the page here -- page 8, for instance,  
10          has a few of the NIOSH resolutions and -- and  
11          we -- we've been back and forth with e-mail on  
12          this. This is in track change mode, obviously,  
13          and NIOSH suggested rewording these resolutions  
14          this way. Jim and I agreed to rethink this  
15          language 'cause it -- it -- I thought it didn't  
16          quite reflect what had been discussed on the  
17          workgroup calls, so there -- wherever there's  
18          highlights, and there's not that many left, we  
19          still had a little bit of disagreement -- not  
20          so much on the intent, but on the -- the way  
21          the resolution was stated. And other than  
22          that, I think all issues are closed.  
23          I received this morning, actu-- or -- or I  
24          worked on it this morning. I received  
25          yesterday -- SC&A had some final edits, and

1           most of those were -- several examples are on  
2           pages 15 or so -- or 14 through like 17.  
3           There's a bunch of cases where NIOSH relied on  
4           the workbooks to a large extent for the dose  
5           reconstructions, and at the time of these  
6           initial reviews SC&A didn't have access or  
7           wasn't aware of the -- the -- the workbook use  
8           in these cases so they couldn't definitively  
9           match the numbers or, you know, cross-walk the  
10          cases. And since then they've been able to do  
11          that and they indicate the result of them -- of  
12          their research back to the actual workbooks,  
13          the Excel spreadsheets that -- that supported  
14          the written document of the case, so -- and  
15          that's sort of the summary of where we're at.  
16          The final thing that needs to be done also is a  
17          -- the last column is a Board action column,  
18          and if you remember, the first set that we did  
19          of these we have Board action, ranking -- Board  
20          actions 1 through 7. And to tell you the  
21          truth, I'll have to revisit the first matrix.  
22          I'm going to include that as a footer on each  
23          one of these matrices so that we don't forget  
24          what 1 through 7 means, but there will be a  
25          final Board action in these, as well. For --

1           for those who -- for those who don't or haven't  
2           looked at these matrices before, there is a  
3           distinction made between the case ranking --  
4           it's the one, two, three, fourth column, the --  
5           a couple of skinny columns in the middle of the  
6           page. There's a case ranking and there's a  
7           site or program-wide ranking. And these are  
8           low, medium or high in both cases, but the case  
9           ranking is did this finding -- or would -- is  
10          this finding low, medium or high as it pertains  
11          to that individual case and the decision made  
12          on that case. And the other -- or -- or in the  
13          dose estimation in that case, I should say, not  
14          -- not necessarily the probability of causation  
15          determination.

16         The other column is a site or program-wide  
17         rank, and that is sort of an impression of  
18         could this finding have a broader effect on all  
19         cases that were done at that si-- at that site,  
20         or, you know, program-wide cases that all  
21         relied on a certain procedure, you know, so we  
22         tried to get -- and these are -- are  
23         subjective, obviously, but -- try to give you  
24         an indication of whether it's a very low  
25         concern for program-wide, as opposed to a

1 higher concern program-wide, so that's what  
2 those mean if you haven't seen these before.  
3 And that's -- that's about it for that --

4 **DR. ZIEMER:** Okay. So what -- what needs to  
5 happen --

6 **MR. GRIFFON:** -- summary.

7 **DR. ZIEMER:** -- is that the workgroup would  
8 recommend the Board action, and then the Board  
9 would have to approve that at our next meeting.  
10 And just for the record, I pulled out the --  
11 what 1 through 7 means, and I'm just going to  
12 read it into the record and here's what it is.  
13 A 1 says NIOSH agrees and accepts the findings,  
14 and basically that closes the item.  
15 NIOSH disagrees but will comply is 2.  
16 Number 3, NIOSH disagrees and will not  
17 implement unless the Board recommends action  
18 through HHS.  
19 Number 4, NIOSH disagrees and the Board and  
20 NIOSH reach a compromise.  
21 Number 5, NIOSH disagrees and the Board  
22 concurs. That is we -- we take NIOSH's  
23 position and therefore that closes the item.  
24 Number 6, the issue's deferred to a site  
25 profile, TBD or other procedure review process.

1           That -- that was the case where some other  
2           aspect or some other procedure would govern  
3           that -- supersede it.

4           And number 7, SC&A concurs with NIOSH's view,  
5           so -- and again that would close it.

6           So those are the -- the various Board action  
7           possibilities, and the workgroup will make a  
8           recommendation for each of the items in the  
9           matrix, then we'll have a chance to concur with  
10          that.

11         **MR. GRIFFON:** Again, this is where Stu's  
12         tracking tool is going to come in -- into play  
13         because we -- the last matrix I think we had a  
14         fair number that were number 6, and that meant  
15         that the -- the action was deferred to the  
16         review of a site profile, 'cause we were in the  
17         process of doing a site profile anyway and we  
18         were digging in much more depth into those  
19         issues so it didn't make sense to discuss it in  
20         parallel so we deferred it to the site profile  
21         process, but we can't lose track of that  
22         action.

23         **DR. ZIEMER:** And you'll notice that there are  
24         only a couple of these that really require  
25         tracking. Most of these are closure items.

1           **MR. GRIFFON:** Right.

2           **DR. ZIEMER:** The one that requires tracking is  
3           where the -- NIOSH disagrees and will not  
4           implement the Board -- unless the Board  
5           recommends, and the other would be that the  
6           issue is deferred to a site profile, TBD or  
7           other procedure review, then we'd have to  
8           review that, so -- okay.

9           **BOARD DISCUSSION**

10           Any other comments on the -- on the dose  
11           reconstruction matrix?

12           **MS. MUNN:** I guess I have one.

13           **DR. ZIEMER:** Okay.

14           **MS. MUNN:** I think it's interesting to note  
15           that in almost all cases, unless I -- my memory  
16           fails me, in all cases the actual impact of the  
17           comments and concerns on the single dose itself  
18           had been -- was low. The impact -- the change  
19           that would have occurred in either case on the  
20           individual case was very low, but we -- where  
21           these were of greatest value I think was in  
22           identifying one or two items which might be  
23           much more broadly applied than to that  
24           individual case. That's been helpful I think  
25           for the working group in kind of following

1 through on -- on our other -- not dose  
2 reconstructions necessarily, but as they're  
3 applied across the site or across the entire  
4 complex.

5 **DR. ZIEMER:** Thank you.

6 **DR. WADE:** I have a couple of issues.  
7 We are a little bit ahead of schedule and I  
8 thought maybe we could use the time -- at least  
9 I'd like to float several issues for the Board  
10 to consider, either now or at a -- at a later  
11 meeting, and let me define them and then we can  
12 talk about them.

13 I mentioned one this morning, and that is you'd  
14 originally set out to audit two and a half  
15 percent of individual DRs. We're proceeding at  
16 the rate of about 80 per year. I think it's  
17 important for the Board to consider whether  
18 that original strategy and pace is still  
19 appropriate. Maybe it is. I think it would be  
20 good to get on the record a discussion of that  
21 strategy and pace.

22 And then the second issue, really very  
23 different than -- from that is the -- the  
24 working group that has been reporting to you is  
25 -- has taken on a tremendous amount of work,



1           and I think the Board should talk about that  
2           and decide whether it wants to continue loading  
3           that working group. I'm not saying it's not a  
4           fine working group and they've done outstanding  
5           work, but I think it's reasonable to pause and  
6           consider and then take action, whatever that  
7           action is.

8           So I think those are two issues that warrant  
9           some discussion. We have a little bit of time  
10          now, possibly we could spend that time talking  
11          about them.

12         **DR. ZIEMER:** Certainly both of tho-- both of  
13         those are important issues to consider. The --  
14         the two and a half percent pace -- and  
15         currently we're at about -- we're at about  
16         eight tenths of one percent. We're not --  
17         we're not halfway there on --

18         **DR. WADE:** No --

19         **DR. ZIEMER:** Well, let's see, we'll be -- if we  
20         select the next 40 cases, we will be at 240 I  
21         believe. Right? We'll have six -- no, we'll  
22         be at 120. We'll be at 120.

23         **DR. WADE:** 160. If we select the next 40,  
24         we'll be at --

25         **DR. ZIEMER:** Let's get some high-powered math

1           here.

2           **DR. WADE:**   Okay.

3           **DR. ZIEMER:**   We have -- we have selected for --  
4           we'll have six groups of 20 selected, which is  
5           about half of where we need to be if there were  
6           no more cases.

7           **DR. WADE:**   Right.

8           **DR. ZIEMER:**   And -- and obviously there will be  
9           more cases, so that if -- if we're talking  
10          about the next three years, for example, then  
11          we are really in a sense behind the pace  
12          because if -- if we're -- if we're turning  
13          around 60 a year and want to get to two and a  
14          half percent of roughly 20,000 cases, you're --  
15          you're talking about -- about 450 cases, so --

16          **DR. WADE:**   Right.

17          **DR. ZIEMER:**   -- we're talking about a four to  
18          five-year task there at the present rate, which  
19          is maybe a little longer than we want to go.

20          **DR. WADE:**   And maybe it's not.   I mean I think  
21          that's a reasonable estimate.   You've got maybe  
22          another three years' worth of work to get to  
23          the target of the two and a half percent of the  
24          20,000.

25          **DR. ZIEMER:**   Now I also point out to the Board

that two and a half percent was in essence an arbitrary number. We're not locked into that by anything other than our own --

**UNIDENTIFIED:** (Inaudible)

**DR. ZIEMER:** Well, all right. The John Till group talked about two and a half percent for the DTRA program, I think, something like that.

**DR. WADE:** Right, there's some precedence.

**DR. ZIEMER:** There's a little precedent for it. On the other hand, if -- if -- if one is pacing along and you're -- you're basically doing this not to get to a magic number of any percentage, but to identify issues. So that's -- that's the -- what's really -- what you want to be doing, and are we doing that at a good enough pace.

Yes, Mr. Elliott, a comment.

MR. ELLIOTT: Yeah, if I could, I'd like to --  
is this on? It's on? It's not up.

DR. ZIEMER: It doesn't sound like it's on.

MR. ELLIOTT: It's on but it's not up.

**DR. WADE:** Why don't you go to the one in the back, Larry.

(Pause)

MR. ELLIOTT: I'd just like to add a little

1 more context for your consideration. Dose  
2 reconstruction program started a little over  
3 four years ago, as you know, and we were doing  
4 what we called cherry picking at the time, as  
5 you know. We were doing  
6 overestimates/underestimates, using our  
7 efficiency process. And then as we proceeded  
8 through those easier-to-do cases through the  
9 efficiency process, we working into some what  
10 we called best estimates. You realized that I  
11 think in your third round of review that there  
12 was this kind of -- this concept of a best  
13 estimate or a full-blown dose reconstruction.  
14 You are seeing in your reviews, your 20 sets of  
15 reviews, you're seeing snapshots in time of the  
16 evolution of our dose reconstruction program  
17 and its process. And why am I saying this?  
18 Well, we have reached a pinnacle, I think, in  
19 that and in our evolution we've -- we've  
20 achieved a level where we're doing more best  
21 estimates. We're doing more difficult cases,  
22 and we're doing cases for sites where we have a  
23 -- a small number of cases and we really don't  
24 treat those, in many situations for many  
25 facilities, with a site profile development

1           tool. We use some other standard type  
2           approach. And I think -- you know, I'm not  
3           sharing anything that's new, but I think you  
4           need to think about this as you're looking and  
5           thinking forward in the pacing of your reviews.  
6           You're going to see different snapshots of our  
7           evolution in time, so I would just add that to  
8           -- to be a little more context for your  
9           consideration.

10          One other thing I'd like to remark upon. I --  
11          as we go back and forth in the matrices comment  
12          resolution with the working groups and SC&A, I  
13          think words become very important. Words such  
14          as "issues," you'll hear us use words such as  
15          "questions" when we don't believe it's an  
16          issue. I think also that we all need to be  
17          careful when we develop a document and we put  
18          it out for display in -- in the public realm,  
19          whether it's on the table back here, on the web  
20          site or we share it in working group sessions -  
21          - that we put the appropriate labels and  
22          disclaimers on those documents. They are  
23          viewed by people as being final in nature, in  
24          some cases, and we all have to explain where  
25          they really, truly are in -- in the process of

1           deliberation and scientific debate. So I would  
2           just ask that you think about that, as well.  
3           And one more comment, if I may belabor the  
4           Board's time here. As -- as we hear and  
5           observe and engage each other in this exchange  
6           of concerns and ideas and issues and have this  
7           scientific debate, I want you all to realize  
8           that we take -- oh, wow -- we take those issues  
9           and comments and questions and concerns that  
10          are raised in that scientific discussion to  
11          heart, and we make changes. We're not waiting  
12          to see whether or not the Board is going to  
13          make a recommendation to the Secretary that  
14          says this has to be done. So you're going to  
15          see that, as well as -- when you look into the  
16          dose reconstructions you're reviewing and into  
17          the procedures, we are making those changes.  
18          We are taking the comments and the concerns  
19          that are raised, we're taking them to heart,  
20          we're considering them very carefully, and we  
21          are modifying either the profiles or the  
22          Technical Basis Documents that we use, and we  
23          are reflecting upon those changes in the dose  
24          reconstructions that are occurring. So I just  
25          wanted to add that for further consideration.

1           **DR. WADE:** Thank you.

2           **DR. ZIEMER:** Thank you, Larry, that's very  
3 helpful.

4           **DR. WADE:** If you -- just if I could pose the  
5 question. If you're looking at 20,000 dose  
6 reconstructions, an audit rate of two and a  
7 half percent, that's about 500. If we're doing  
8 about 60 a year, that's about eight years'  
9 worth of work. Doesn't mean we don't stay the  
10 course. I just think it's important for the  
11 Board to consider that and, you know, and  
12 reinforce its position or modify its position  
13 as appropriate.

14          **DR. ZIEMER:** Wanda, you have a comment?

15          **MS. MUNN:** It's hard to evaluate, I think,  
16 whether we have done the majority of the heavy  
17 lifting that's necessary to establish a really  
18 sound basis for future activities. My sense is  
19 that we have done that, looking -- doing the  
20 site profile reviews and doing the --  
21 especially doing the procedure reviews. I  
22 would hope that we have all established a  
23 better basis so that we understand how we are  
24 proceeding a little better than we did the  
25 first year or so when we were first beginning.

1           Also, it's not clear to me how many additional  
2           site profile reviews we are going to be dealing  
3           with. It would seem likely, given what I now  
4           know, that for the next year our workload and  
5           the workload of NIOSH and our contractor, are  
6           likely to be very similar to what they've been  
7           over the last year. Following that, I would  
8           think that perhaps our work might diminish  
9           somewhat.

10          Given that background, I'm hesitant to suggest  
11          that we accelerate our review of dose  
12          reconstructions quite yet. I would hope we  
13          might be able to do that a year from now, but  
14          right now -- as has been pointed out before --  
15          the same people have to do this work that are  
16          doing the work that the claimants are so  
17          painfully waiting to have accomplished.

18          My personal preference would be to stay the  
19          course for the time being, defer the decision  
20          on acceleration perhaps for another -- at least  
21          until we've completed these that we've chosen  
22          today, and possibly a year from now.

23          **DR. ZIEMER:** Thank you. Other comments? Roy.

24          **DR. DEHART:** As I recall, when we started  
25          looking at some way of sampling, there were two



1 reasons that we were going to do that. One was  
2 to assure scientific methodology, and that  
3 certainly was critical in the front end. The  
4 second is quality assurance, and that not only  
5 is front end, that is a continuation process.  
6 I would ask if we have any data on issues of  
7 reconsideration of objection or formal appeal  
8 on the part of those cases that have already  
9 gone forward, and to what impact that has had.

10 **DR. ZIEMER:** Thank you. That -- that's a more  
11 than rhetorical question. I think you're  
12 really asking NIOSH that question, and Larry,  
13 I'm not sure if you caught that fully, but --  
14 restate it -- Larry --

15 **DR. DEHART:** The question was what have we had  
16 in terms of reconsideration of objections or of  
17 formal hearings with regard to those cases that  
18 have already been resolved initially.

19 **MR. ELLIOTT:** Well, we've not -- I don't  
20 believe that we've had -- of the 60 cases that  
21 you've finished your review on and the 20 that  
22 are in the fourth set that we have SC&A's  
23 comments on, I think Wanda stated this earlier,  
24 we have not seen any review comment that would  
25 have changed the compensation decision on those

1 cases.

2 We have heard that in some ways our efficiency  
3 process has been overly generous in some ways,  
4 and we have taken stock of that, looked at  
5 that, but we want to give benefit of the doubt  
6 to the claimants, as our rule indicates we  
7 should where -- where science does -- does not  
8 give us any further advantage.

9 We have not, in my understanding, had any cases  
10 out of those that have been completed and sent  
11 back to Department of Labor, I believe there's  
12 only one case that has been moved through the  
13 FAB process and into a district court  
14 situation, and I think that's a recent --  
15 recent -- recent case. It's not a case that --  
16 none of the cases that you all have reviewed, I  
17 believe, have had any further scrutiny within  
18 DOL's Final Adjudication Branch or have gone  
19 into a district court situation. The case  
20 that's at district court has not been part of  
21 your review.

22 **DR. WADE:** I think --

23 **DR. DEHART:** I thought you were going to answer  
24 my question totally --

25 **MR. ELLIOTT:** I'm sorry.

1           **DR. DEHART:** -- which was really the  
2           fundamental part, and I have -- I apologize for  
3           not being clear.

4           **MR. ELLIOTT:** No, I'm probably not --

5           **DR. DEHART:** Of all the awards made, of all the  
6           -- all the cases reviewed by NIOSH and the  
7           Department of Labor, what -- how many have --  
8           have been questioned or gone in for review or  
9           whatever -- by the claimant.

10          **MR. ELLIOTT:** Oh, okay, so -- oh, I'm sorry.  
11          So you're talking about those cases that have  
12          gone on -- that have been appealed at the Final  
13          Adjudication Branch level?

14          **DR. DEHART:** That's correct.

15          **MR. ELLIOTT:** I'd have to -- DOL would have to  
16          answer that question. I don't have those  
17          numbers. I can tell you that the number of  
18          remands that we get back are less than two  
19          percent. I don't know how many -- and those --  
20          those remands are not always on dose  
21          reconstruction methodology. They're on -- you  
22          know, the majority of those remands are on  
23          additional cancers identified after the claim  
24          has been done or dose reconstruction has been  
25          done and we have to redo the dose

1 reconstruction, or additional employment that  
2 might have been developed after we had  
3 completed the case. There's very -- there's --  
4 there's been some technical concerns raised,  
5 but by and far the majority of that two  
6 percent, I believe -- less than 800 reworks,  
7 Mr. Turcic is telling me from the -- from the  
8 bleachers here, and that includes technical and  
9 -- and the other case development issues.

10 Does that answer your question? I'm sorry I  
11 didn't understand what your...

12 **DR. DEHART:** That's fine. I was glad to hear  
13 both parts of that. That speaks to quality  
14 assurance.

15 **DR. ZIEMER:** Okay. Thank you. Other comments,  
16 questions?

17 **DR. WADE:** John Mauro has a...

18 **DR. ZIEMER:** Yes, John Mauro.

19 **DR. MAURO:** Yes, Dr. Ziemer. I've been giving  
20 this some thought because it's a very  
21 interesting problem, and recently I think a  
22 part of the answer emerged. Bear with me for a  
23 minute.

24 When we were looking at the data validity issue  
25 related to Y-12, what we found out, in 19-- and

1           bear with me; this is related to what we're  
2           going to be talking about. In 1953 there were  
3           14,222 urine analyses taken. Okay? That's how  
4           many samples were collected, 1953.  
5           NIOSH went in and sampled randomly 22 of those.  
6           See -- okay. So we went over to our  
7           statistician, say what does that tell us? We  
8           went in and we sampled 22 -- and by the way,  
9           all 22 came back okay. So in other words, we  
10          went in and -- it's almost like a standard --  
11          this is a very standard statistical tool for  
12          quality assurance. So our statistician says  
13          well, you know what that means. It means you  
14          could be 90 percent certain that less than 10  
15          percent of those samples are bad apples. So in  
16          other words, it's a very powerful statement.  
17          The twenty-- when someone -- we -- we were  
18          surprised the answer came out that way. Stay  
19          with me for a minute.  
20          Wow, so there's 14,222 urine samples. You go  
21          in and just randomly pick 22, and out of the 22  
22          all come back okay. Statistically that means  
23          you could be 90 percent certain -- and you're  
24          going to hear more about this later when we  
25          talk about Y-12; Arjun will be speaking to this

1           -- you could say with a 90 -- at a 90 -- at a  
2           high level of assurance that -- that less than  
3           90 -- ten percent are a problem. Now.  
4           Now let's move on to the question before us.  
5           We sampled 80 cases. Okay? They're sort of  
6           like the 22 in the urine sample. And there are  
7           -- I don't know how many thousands of cases out  
8           there, but we pulled 80. Now here's -- here's  
9           what has to happen. Out of those 80, some  
10          collective judgment has to be made, how many of  
11          those do we feel are problematic, and there's  
12          the -- there's the nub, and that's going to be  
13          a judgment call that has to be made  
14          collectively. Now the -- granted that they may  
15          not have -- that they -- that they don't result  
16          in a reversal. Well, sure, that's one  
17          criteria, certainly, if we find one that the  
18          result wasn't -- and we don't come to that  
19          conclusion, but let's say we find that we have  
20          a certain critique, the critique is evaluated,  
21          for example. And when you're done you say oh,  
22          my goodness, yeah, we did mess this one up.  
23          This is a reversal. Well, that's certainly a  
24          problem.  
25          But it's very hard to say out of those 80 how

1           many of those would collectively the Board say  
2           you know, I think that's a significant enough  
3           problem that we would consider it to be a  
4           problem, for whatever reason, a judgment is  
5           made and -- now, once you have that, let's say  
6           you decide that well -- and here's -- here's  
7           the tough problem. You want to be able to say  
8           out of the sample that we collected we want a  
9           high level of assurance that there are very few  
10          number of bad actors, and we have the  
11          wherewithal to do that. So there's a two-step  
12          process here. One is a judgment has to be made  
13          on the part of the collective judgment of the  
14          Board, I would say, or even a larger decision-  
15          making body, what -- what fraction of the total  
16          number of cases processed ha-- have to -- or --  
17          have to be found to be -- or -- there should be  
18          -- the question goes we need to have a high  
19          level of assurance that the fraction of  
20          problematic cases is less than some percent. I  
21          don't know what that number is. But once you  
22          get to that point and you come up with that  
23          decision criteria, then the next step is okay,  
24          we reviewed 80. Out of the 80, or whatever  
25          number is picked, we come -- we walk away and

1 say we can say with -- and let's say -- let's  
2 say, just for the sake of argument, two -- two  
3 out of the 80 -- we sampled 80, two of them are  
4 problematic to the extent we consider them to  
5 be a problem that shouldn't have -- you know,  
6 it's -- it's an error.

7 (Whereupon, Dr. Melius joined the other Board  
8 members at the table.)

9 **DR. MAURO:** What I'm getting at is that is a  
10 very classic statistical problem that's very  
11 tractable and manageable. The tough question  
12 is what percent do you folks feel would  
13 represent an unacceptable situation out of the  
14 population of cases, and at what level of  
15 confidence do you want to make sure that that  
16 sample is acceptable. Do you want to get that  
17 prescriptive, because that's a -- it's almost  
18 like a suicide pact. When you start to make  
19 numbers that prescriptive, you're in a  
20 situation where it's a switch, and when you go  
21 -- once you turn that process on, it's  
22 automatic, and the outcome would be yes or no.  
23 So all I'm offering up is as a result of the  
24 experience we had looking at the 22 urine  
25 analysis samples out of the 14,222 actual urine



1           analyses that existed in 1953, we were able to  
2           make a statement, 90 percent confident that  
3           less than 10 percent are a problem. I think  
4           you have exactly the same situation here.

5           Whether or not you want to engage this -- you  
6           know, this issue in that manner is -- is, I  
7           would say, an important subject that needs to  
8           be discussed. I hope that's helpful.

9           **DR. ZIEMER:** That's very helpful, John. Let me  
10          point out one difference here. That is that  
11          these cases are actually a little more complex  
12          than a urine analysis, which is very  
13          prescriptive -- a single variable situation.  
14          The other thing I'll comment, and I guess it's  
15          obvious in everybody's mind, is that the end  
16          point that is of maj-- most concern is the  
17          decision. Are we making the right compensation  
18          decision. Now we're also looking -- I think we  
19          all hope that we're not making that decision  
20          based on the wrong reason and criteria. I mean  
21          even if you came out right, you don't want to  
22          be doing it that way, so we also want to say  
23          are we doing the right science along the way,  
24          are the dose reconstructors doing it right to  
25          reach the right decision. So it's -- it is

1 perhaps more complex. But ultimately that  
2 issue of are -- are we suddenly finding that  
3 there's a lot of wrong decisions being made,  
4 that would be a major, major problem -- as  
5 opposed to yes, the right decisions are made,  
6 but this reconstructor did it a little bit  
7 differently but it didn't make any difference  
8 or whatever.

9 And Larry has a comment and Mike has a comment,  
10 I think Mark has a comment. Go ahead, Larry.

11 **MR. ELLIOTT:** Thank you, Dr. Ziemer. I just  
12 wanted to follow on what Dr. Mauro had to say.  
13 There's a whole science of what he was talking  
14 about, and that's -- you know, the military has  
15 developed that statistical approach, strategic  
16 sampling, to determine an error. There are  
17 calculations that we can present to the Board  
18 to show you how to go about sampling at a  
19 statistical significant level to achieve a  
20 sense of confidence and comfort that a  
21 inappropriate, wrong decision has not been  
22 made. If that's what the Board wants to see,  
23 we can certainly provide that in support to the  
24 Board.

25 I agree with you, Dr. -- Dr. Ziemer, in what

1           the program's policy has been, we do not want  
2           to see one -- one dose reconstruction result in  
3           a -- a negative determination on compensability  
4           that should have been compensable. That's what  
5           we've been striving for. Certainly we have  
6           seen cases go through dose reconstruction and  
7           get compensated, and some people might say that  
8           they did not deserve that. I'm not going to  
9           say that. I'm saying that our dose  
10          reconstruction was accurate in that instance.  
11          What I do not want to see happen is a case that  
12          we reconstruct a dose for and a decision is  
13          given, no, you're not compensable -- and we  
14          find out that we missed the mark. That's not  
15          what we want to happen.

16       **DR. ZIEMER:** Thank you. Michael?

17       **MR. GIBSON:** Yeah, I just -- I'd like to agree  
18       with Wanda. You know, I think that there are a  
19       lot of sites that we don't have the site  
20       profiles done for, a lot of the bigger sites --  
21       well, I don't know how many, but several. And  
22       I'm just afraid if we go ahead and pick out  
23       cases without having all the knowledge from the  
24       site and everything else, we may be looking at  
25       dose reconstruction that perhaps NIOSH didn't

1           even have enough information at the time to  
2           make a decision. So I would almost rather see  
3           us maybe from back down to 20 instead of 40 and  
4           maybe slightly slower the pace until -- even if  
5           it does take a few years more out, we've got  
6           more information at hand rather than just say  
7           this looks like an interesting case.

8           **DR. ZIEMER:** Thank you. And Mark?

9           **MR. GRIFFON:** Yeah, I -- I'm reluctant to --  
10          certainly reluctant to escalate, as well as  
11          Wanda said, and part -- part of it I think is  
12          that, you know, I'm not sure that the -- what's  
13          in our -- our pool to sample from right now. I  
14          think that might be a useful thing to -- to  
15          reflect back on. I know it's -- I know we've  
16          asked for it before, but it might be, again,  
17          time to get a snapshot because I think some --  
18          some stuff is done batch-wise, for obvious  
19          reasons because you complete your site profiles  
20          and you -- so we may be missing some -- some  
21          sites that we definitely want to take a large  
22          sample from. So -- and also just the ongoing  
23          work, I think it -- you know, it -- it makes  
24          sense to either keep the pace the same or -- or  
25          maybe decelerate just a hair.

1           The other thing I think might be useful is, as  
2           we discussed earlier, having the -- the dates  
3           when cases became available in the pool -- or  
4           the dates when the cases were dose -- were --  
5           were completed, were dose reconstructed. And  
6           the reason I asked for that is -- you know, I  
7           hear what Larry's saying is that, you know, as  
8           we're ongoing with this workgroup process and  
9           the Board process, they -- they're making  
10          changes to these things. But if -- if we're  
11          sampling from things that were done in the  
12          original, we're -- we're not going to even see  
13          those changes in what we review so we're going  
14          to come down -- you know, so that might be  
15          useful, too. We might be sort of wasting our  
16          resources to resample and find the same issues  
17          from those early cases, which we already  
18          captured and discussed thoroughly. So it might  
19          be useful to -- to have a little more  
20          information of what we're sampling and -- and  
21          get the -- you know, use our resources more  
22          wisely to...

23       **DR. ZIEMER:** Okay. Dr. Roessler?

24       **DR. ROESSLER:** I think I'm just going to  
25       confirm --

1           **MR. PRESLEY:** This is Bob Presley, can you hear  
2 me?

3           **DR. ROESSLER:** -- what a couple of people have  
4 said. I think what Mike is saying and I'm  
5 looking at is perhaps we have higher priority  
6 things to do, things where we can get more  
7 information and advance things better.  
8 The other thing is, I'm not sure that this  
9 sophisticated statistical evaluation of this --  
10 I don't think it's like the urine samples. I  
11 think what we have here -- it's a much more  
12 complicated situation where it's probably very  
13 difficult to put some numbers on it because  
14 it's ongoing. And like Mark says, you know,  
15 we're going way back doing some that were done  
16 at the beginning. We need to have time to  
17 evaluate that, find out where the problems are,  
18 and those problems can be corrected. So we  
19 might be looking at having done a bulk of them  
20 where things can be corrected where we don't  
21 have to go, in my view, maybe to that full two  
22 and a half percent.

23           **MR. GRIFFON:** Yeah, and -- and like I was  
24 saying, in many cases those problems may have  
25 been corrected already, but if we sample from

1 cases that were done before that -- that date,  
2 we're going to see the same problem and wonder  
3 -- wait a second, you know, so -- so I think we  
4 want to take that into account, you know.

5 **DR. ZIEMER:** Well, it certainly appears that  
6 there's not a big sentiment for speeding up or  
7 increasing this process right now, but to maybe  
8 stay on course, having some degree of  
9 selectivity because the procedures are  
10 changing, the pool of people is changing as  
11 well, and that allows us to be flexible as we  
12 move forward in the process.

13 **DR. WADE:** I think so.

14 **DR. ZIEMER:** And Arjun, did you have an  
15 additional comment?

16 **DR. MAKHIJANI:** Yeah, Dr. Ziemer, something --  
17 a suggestion you might consider. We -- we  
18 spent a lot of time going through the matrices  
19 and -- both in -- well, in the dose  
20 reconstruction reviews, in the SEC reviews and  
21 in the site profile reviews, and in that  
22 context I think certain difficult issues come  
23 up where it could be very useful to audit or  
24 pick dose reconstructions that have been  
25 completed with realistic or best estimates that

1           exemplify the issues we've identified as  
2           difficult so that we can consider them resolved  
3           or make recommendations or the Board might want  
4           to make recommendations as to how they might be  
5           resolved, the problems, or -- so there might be  
6           a different way than if the -- if the idea is -  
7           - is not to determine if in the pool NIOSH has  
8           got good and bad cases, but rather to solve  
9           identified problems so dose reconstruction can  
10          be better, we might go through a comment  
11          resolution and pick cases that way.

12       **DR. ZIEMER:** I think to some extent that  
13       reflects the intent of some of the things we've  
14       been doing. It's basically a targeted  
15       selection or -- of -- of cases based on -- that  
16       could be one of the criteria, as well as others  
17       that we have used, so thank you for that  
18       suggestion.

19       **MR. PRESLEY:** Paul --

20       **DR. ZIEMER:** If there's no objection, let me...  
21       Yeah, go ahead, Brad. You have another  
22       comment?

23       **MR. CLAWSON:** Well, no, I just -- I was hearing  
24       Mr. Presley on --

25       **DR. ZIEMER:** Oh, Bob, are you -- Bob, we



1                   probably have your sound turned down there.  
2                   Hang on a second, we'll get you cranked up  
3                   and...

4                   **MR. PRESLEY:** Can you hear me?

5                   **DR. ZIEMER:** Yeah, go ahead now, Bob.

6                   **MR. PRESLEY:** Thank you. I didn't know where  
7                   you -- I tried to comment a couple of times. I  
8                   feel like the rest of the Board members. I do  
9                   not think that we should increase the number of  
10                  cases to review. We need to put our resources  
11                  on the SEC petitions and move on with our jobs.

12                  **DR. ZIEMER:** Okay. Yes, thank you very much  
13                  for that comment.

14                  Bob, what's happening here is that when you're  
15                  not speaking we're turning your volume down  
16                  'cause the -- the phone hookup is kind of  
17                  hissing here, so when you want to speak you'll  
18                  have to yell real loud to catch our attention,  
19                  then we'll crank you up.

20                  **MR. PRESLEY:** I can do that.

21                  **DR. ZIEMER:** Yeah. Yeah, Brad is listening for  
22                  you. Let's turn our attention for a few  
23                  moments to this issue of the load of the  
24                  working group. Let me start with an  
25                  observation and then we'll get some additional

1           comments.

2           Number one, I think the idea of having  
3           different working groups to address the dose  
4           reconstructions, small working groups, has  
5           worked rather well. Likewise, we've gone into  
6           a mode of having now individual working groups  
7           for individual sites, so I think we're moving  
8           from the one where we had a working group doing  
9           site profiles. And as we get through this  
10          process and get past Y-12 and Rocky, I'm  
11          hopeful that we'll be at the stage where we in  
12          fact do not have one working group trying to  
13          handle all of the site profile reviews.  
14          The final piece of this is then the dose  
15          reconstruction part -- that part of the matrix,  
16          and I don't know that we would need to  
17          necessarily solve this today, but we could  
18          think about doing something similar there where  
19          we might have a team responsible for the matrix  
20          of, you know, the first 20, second 20, third 20  
21          -- 'cause you now all have experience and, you  
22          know, we kind of developed that process and it  
23          worked well having one working group to  
24          spearhead that. And now that we're into more  
25          of an operational mode with that, that seemed

to me it would be rather easy to say okay, Gen  
Roessler's team will take the next 20 cases and  
they'll be responsible for the matrix, or  
something like that.

Give that some thought and maybe -- maybe at the next meeting we -- well, and -- and let me -- let me say this. The other thing I would like us to think about is -- in that connection is restructuring how we do subgroup -- subcommittee work, 'cause the subcommittee work ends up being the full committee acting as a subcommittee and there's some inefficiencies in doing that 'cause we sit together and do our work and then repeat it. So -- and if we get into this other mode, maybe most of this work could be done by workgroups and then brought back fully.

**UNIDENTIFIED:** Hang on a minute.

**DR. ZIEMER:** I'd like to hear other comments on this.

(No responses)

No other comments?

MS. MUNN: Yes.

**MR. GRIFFON:** Only -- I mean the only -- the only thing I would say is in the beginning we

1           talked about doing this as a subcommittee, but  
2           my vision of it was not a -- not a subcommittee  
3           of the full committee. It was a subcommittee.  
4           And the only -- I mean it might be worthwhile  
5           considering that because I think the important  
6           part of this is consistency, although I guess -  
7           - you know, we -- we've -- we've got some --  
8           you know, we've got some history here with the  
9           60 cases and then 80 cases, and as we're going  
10          forward I think it's important for -- although  
11          we all get reported -- you know, the  
12          information reported back to us, but I think  
13          there is a certain element that we want to be  
14          consistent with our actions for certain types  
15          of findings and that sort of thing. So if we  
16          have a lot of workgroups working separately,  
17          then when we put them together -- could see  
18          some inconsistencies so I don't know.

19       **DR. ZIEMER:** Yeah. Well, give it some thought.  
20       I don't think we have to necessarily change  
21       anything today.

22       The other -- the other thing is one of the  
23       reasons we had the subcommittee set up the way  
24       we did was to assure that there were -- the  
25       meetings were always open. But in fact the way

1           we're operating now, our workgroup meetings are  
2           open anyway. You know, we had that -- the  
3           distinction as a subcommittee has to be open  
4           and announced and so on, workgroups do not.  
5           But in fact we're almost operating them like  
6           subcommittees.

7           **MR. GRIFFON:** Yeah.

8           **DR. ZIEMER:** Yes, Jim.

9           **DR. MELIUS:** Yeah, I would just concur with  
10          Mark in the sense I think we need to provide --  
11          continue some consistency on the dose  
12          reconstruction review, whereas I think sort of  
13          ad hoc workgroups for site profiles, SEC  
14          petitions, evaluations make sense, but I -- I -  
15          - I do think there's enough complication of  
16          this and so forth that we need to keep the  
17          subcommittee process going, at least for that,  
18          or at least a smaller consistent -- whether  
19          it's a workgroup or subcommittee, we can.

20          **DR. ZIEMER:** We don't have this on the agenda  
21          to do anything today, but I think Lew at least  
22          wanted us to be thinking about the workloads  
23          there.

24          **DR. WADE:** Right. And thank you. On both  
25          issues that's what I hoped we'd accomplish, a

1 discussion on the record and, you know, tee up  
2 some issues and we can deal with them as  
3 appropriate. I would like to again thank the  
4 workgroup that Mark chairs for a tremendous  
5 effort.

6 **DR. ZIEMER:** And we -- we all -- everyone on  
7 the Board is very thankful for that, as well.  
8 We're going to take a break and then we'll  
9 reconvene at 3:30.

10 (Whereupon, a recess was taken from 3:13 p.m.  
11 to 3:40 p.m.)

12 **BOARD SEC PROCEDURES**

13 **DR. ZIEMER:** Okay, we're ready to reconvene.  
14 The next item on our agenda has to do with the  
15 Board's SEC procedures. You may recall, Board  
16 members, we adopted a kind of an operating  
17 paper a meeting or so ago on how we would  
18 proceed to handle SEC petition reviews.  
19 Meanwhile we also had the contractor reviewing  
20 the issue of how they would address SEC  
21 petitions, as well as some recommendations on  
22 Board procedures. Jim Melius has headed up the  
23 workgroup on the Board's SEC procedures, so  
24 Jim, if you'll kick it off, and then I think  
25 John Mauro or one of his colleagues are going

1 to jump in here in a minute, as well, so...

2 **DR. MELIUS:** Okay. I have to first start by  
3 apologizing. I had a little computer glitch in  
4 my office on Friday, so when I tried to send  
5 this information to the working group, as I had  
6 promised I would do, you didn't receive it. So  
7 -- but it turns out I think we're -- I think  
8 this is relatively straightforward.

9 As we talked on our workgroup call a few weeks  
10 ago, SC&A had proposed a set of procedures for  
11 reviewing SEC evaluations -- reports from --  
12 from -- from NIOSH, and we had worked out -- in  
13 our last meeting we had talked about a  
14 procedure where we would -- in terms of forming  
15 working groups and then figuring out how we get  
16 our working groups and SC&A started on doing  
17 some of the review work on an SEC evaluation  
18 prior to the -- NIOSH having produced the  
19 evaluation report -- has some obvious  
20 difficulties so I think -- I think in some  
21 cases it can be a -- it can work out, as I'll  
22 talk about in a second.

23 So what I'll do is I'll sort of present sort of  
24 my modifications of what SC&A proposed, and  
25 then John Mauro will sort of talk about the --

1           some more of the details which I was actually  
2           proposing to delegate to them to sort of work  
3           out the details from their -- procedurally.  
4           Most of it would involve modifying some of  
5           their procedures to incorporate our guidelines  
6           for SEC review.  
7           So in the original SC&A proposal to us they had  
8           proposed three phases. I'm sort of reducing  
9           that down to two phases, and -- to make it  
10          simpler and I think it -- it works just as  
11          well. Phase one is a -- when a petition has  
12          qualified, and at that point -- up until that  
13          point we really hadn't seen the petitions. We  
14          haven't had a chance to re-- to know much about  
15          -- we may know of their existence, but we don't  
16          know scope often and Larry and his staff is  
17          going through the process of determining  
18          whether that petition does qualify for further  
19          review.  
20          They then -- he -- Larry then notifies us, the  
21          entire Board, whenever an SEC petition has  
22          qualified. And at that point what I'm  
23          proposing is that -- or shortly thereafter.  
24          Now some of this timing may have to do with --  
25          with where we are relative to a Board meeting



1           and so forth, but I think the logistics can be  
2           pretty straightforward. I'm proposing that the  
3           Board form a workgroup that would evaluate --  
4           be ones that would monitor and evaluate that  
5           particular petition and follow it through. If  
6           we have a -- or we have a group that's  
7           reviewing a site profile for that same site, it  
8           may make sense to have them continue, which is  
9           really what we've done with -- with Y-12 and  
10          Rocky Flats. But if not, we can form a -- form  
11          a workgroup.

12         And at the same time we work with Lew and NIOSH  
13         to authorize SC&A to conduct some preliminary  
14         work that -- to start to evaluate that -- that  
15         petition. And what -- that's later. What that  
16         preliminary work would involve would be to,  
17         one, review the petition and the supporting  
18         documents, and there's usually -- at least we  
19         found with -- with Ames there's -- there could  
20         be a large set of supporting documents with  
21         that; to interview the petitioners to better  
22         understand what their concerns are and what  
23         other information they may have that would be  
24         in support of the petition they may not have --  
25         have included in that petition. NIOSH may have

1           some additional information at that -- that  
2           point, also.

3           And -- and then for SC&A to start working to  
4           sort of evaluate the petition, the site profile  
5           -- any site profile review that are -- that's  
6           been done to identify sort of a preliminary  
7           list of key issues that may be important in the  
8           SEC evaluation.

9           Now that I would view as sort of -- not as a --  
10          as a very in-depth review, but rather a way of  
11          getting familiar with the work, the information  
12          about the site and about the -- what the  
13          petitioners' concerns are, about the supporting  
14          documentation for the petition and so forth.  
15          It would be essentially independent of NIOSH's  
16          work in terms of evaluating that petition,  
17          which I think is important, and it's -- keeps  
18          us at sort of a parallel path to -- to NIOSH's  
19          work I don't think -- would not unduly  
20          interfere with -- with what Larry and his staff  
21          is doing, but I think would at least get us  
22          better prepared at the time the evaluation  
23          report is -- is finally ready and published.  
24          If -- if warranted and approved by the  
25          workgroup, SC&A could also begin review of what

1 I'm calling critical databases. These are the  
2 sources of monitoring data that are obviously  
3 going to be critical to the decision on the  
4 particular petition. They most likely -- they  
5 -- if they do exist they would have been things  
6 that would have been identified in the site  
7 profile. I think it would be -- most part  
8 pretty obvious datasets. They may not be -- we  
9 may not identify those on most petitions and --  
10 and at this stage, and I don't think we want to  
11 create a lot of work here that's unnecessary,  
12 but if there is something obvious that needs to  
13 be -- be looked at, I think that it may make  
14 sense to get started 'cause that will save time  
15 at a later step in the process.

16 So then we get to the next phase which is what  
17 -- my phase two, which is NIOSH has published  
18 their evaluation report and at that point in  
19 time I propose that the workgroup meets again -  
20 - this may be by -- by conference call to --  
21 you know, based on the evaluation report, to  
22 sort of re-review what's been done, talk to  
23 SC&A, what -- what have they found and they  
24 report to date, what are going to be the key  
25 issues for reviewing the NIOSH report. SC&A

1 will go through that part of the process based  
2 on our evaluation guidelines, so forth. As  
3 part of this, SC&A may make -- conduct -- our  
4 contractor may conduct site visits, interview  
5 key site personnel, whatever, so -- and so  
6 forth that would be relevant to that SEC  
7 evaluation review.

8 We would then poll -- do -- what we have been  
9 doing is having workgroup meetings with NIOSH  
10 and petitioners, be announced to the public,  
11 discuss preliminary review, resolve critical  
12 issues, develop further plans for resolving  
13 other issues and so forth and, again, process -  
14 - I think is really is what's carried out from  
15 that point in -- point in time.

16 So what I would like to do now I -- I would  
17 propose that -- now that I turn it over to John  
18 Mauro who then can sort of fill you in on -- on  
19 some of the details here. I think to implement  
20 this approach we would need to have SC&A do  
21 some re-writing of their procedures, not as  
22 much for the phase one and phase two as much as  
23 it is to incorporate our guidelines into --  
24 more explicitly into their procedures for doing  
25 SE -- SC&A for SEC reviews -- too many S -- S -

1           - S and Cs here -- do that.     But before I turn  
2           it over to John, does anybody have any  
3           questions or comments?

4           Yeah, Lew.

5           **DR. WADE:**   Just a clarifying question, Jim.  
6           You would do this for each and every petition  
7           that qualified or you would select certain  
8           petitions to -- to engender this process on?

9           **DR. MELIUS:**   I -- I think we would do it for  
10          all petitions that are generated from the  
11          outside petitions -- all outside petitions.  
12          Petitions such as Nevada Test Site that were --

13          **MR. ELLIOTT:**   83.14.

14          **DR. MELIUS:**   Yeah, the -- thank you, Larry --  
15          the 83.14 petitions, which are in some sense  
16          generated by the dose reconstruction process.  
17          I think we're going to have to make a decision  
18          on -- on -- individual decision on those.   Some  
19          of them are so small -- I guess -- yeah,  
20          they're really discrete, they don't cover a lot  
21          of people and I don't think we need to generate  
22          this much work for them.   When you have those  
23          type of petitions like we do with Nevada Test  
24          Site, which -- even though they're discrete,  
25          but there's a sort of a large -- larger picture

1 out there, I think we're going to have to  
2 decide what's the best way of engaging those.  
3 We may want to actually -- in that -- those  
4 cases, really the first we hear about those is  
5 when NIOSH produces an evaluation report, so we  
6 may want to see the evaluation report, have it  
7 presented at a meeting and then decide what the  
8 -- the prop-- you know, the best way is of --  
9 of going forward on that. And I would also add  
10 that there may be other part of this that we --  
11 we may -- the petitions where we may decide  
12 that we don't need to even have SC&A be  
13 involved in it. We may -- the Board may feel  
14 comfortable with -- with that. We may want to  
15 wait until the NIOSH report comes out in order  
16 to evalua-- --

17 **DR. WADE:** Yeah, my only --

18 **DR. MELIUS:** -- before we can go forward.

19 **DR. WADE:** The only purpose of my question was  
20 to get a sense of the -- the scope of this in  
21 that we have a proposal from SC&A that we're  
22 operating under now that looks at six full-  
23 blown reviews a year, and we just have to get a  
24 sense of scale and -- but that'll come later.

25 **DR. ZIEMER:** Roy DeHart and then Gen Roessler.

1           **DR. DEHART:** Jim, I assume we're talking only  
2           about those NIOSH reports that say they can do  
3           dose reconstruction. If they cannot do dose  
4           reconstruction, do we need to do further review  
5           with -- via contractor?

6           **DR. MELIUS:** Well, we're not going to know  
7           ahead of time so we're going to have done phase  
8           one, and I think at -- at the time the  
9           evaluation report is published, becomes  
10          available, and we have that workgroup meeting -  
11          - if I can go backwards -- that initial  
12          workgroup meeting to identify key issues, I  
13          think then we can decide how -- what extent do  
14          we need to engage SC&A to -- to go forward on  
15          that.

16          **DR. ZIEMER:** So there are decision points along  
17          the way that will --

18          **DR. MELIUS:** Yes.

19          **DR. ZIEMER:** -- determine where you go next.

20          **DR. MELIUS:** Right, and if I can just add that  
21          I think -- we'd also, I think, be on -- well,  
22          more solid grounds of doing so than just -- and  
23          the fact that we would have had some input from  
24          our contractor on -- on scope and they may pick  
25          up on things that we weren't...more -- more

1 informed decision at that point in time.

2 DR. ZIEMER: Gen?

3 DR. ROESSLER: I think I need to have you go  
4 back another slide or so. At what point does  
5 the workgroup, the Board, SC&A step in? And I  
6 think it -- like -- yeah, that was the one.

7 DR. MELIUS: Here?

8 DR. ROESSLER: No, next --

9 DR. MELIUS: That's Ames, but this one here.

10 DR. ROESSLER: This one, like interview  
11 petitioners. At that point is both the  
12 workgroup for the Board and NIOSH going to be -

13 -

14 DR. MELIUS: Well, NIOSH will only --

15 DR. ROESSLER: -- talking --

16 DR. MELIUS: -- have been in contact with the  
17 petitioners as part of the qualification  
18 process and so very often Larry or his staff  
19 will have spent a lot of interaction with the -  
20 - with the petitioner. I think -- I think what  
21 I'm proposing is that SC&A would also have  
22 discussions with the petitioners. We would --  
23 could, you know, involve them in any conference  
24 calls and so forth that the workgroup or the  
25 Board has 'cause I actually think it would be



1 helpful to -- for the Board and our contractor  
2 to be engaged with the petitioner at an earlier  
3 phase. I -- it -- it happens later on, and I  
4 don't -- I think it would be helpful --

5 **DR. ROESSLER:** So you're moving everything up,  
6 it's going to be kind of a parallel process or  
7 --

8 **DR. MELIUS:** I think it -- I think it's --  
9 yeah, but --

10 **DR. ROESSLER:** -- I'm not quite sure I --

11 **DR. MELIUS:** Yeah, it's a parallel process but  
12 it's not an in-depth pro-- I mean NIOSH's  
13 evaluation's much more in -- in-depth process,  
14 but I -- I think it -- it's helpful to have  
15 some level of contact with the petitioner to  
16 know what their concerns are and -- and so  
17 forth and -- for the process. Whether the  
18 workgroup do that or SC&A, I don't -- not sure  
19 how -- how that would do. I don't see it as  
20 being something very extensive or involved.

21 **DR. ROESSLER:** So the intent of your -- you're  
22 moving up the Board involvement in it and the  
23 intent is to -- to get things moving along a  
24 little faster? Is that it?

25 **DR. MELIUS:** And so that at the time the

1 evaluation report comes out we're more informed  
2 and in better position to go forward with --

3 **DR. ZIEMER:** Or at least a subset of the Board  
4 is.

5 **DR. MELIUS:** Subset, yeah, yeah. And -- and --

6 **DR. ROESSLER:** Yeah.

7 **DR. ZIEMER:** Probably not the full Board.

8 **DR. MELIUS:** I don't remember the number of  
9 hours involved, but like on the -- I believe it  
10 was the Ames petition, John may be able to  
11 speak to this, they actually originally  
12 proposed a lot of hours on -- on the Ames and I  
13 was actually taken aback a little bit about how  
14 much they had proposed to be involved, and when  
15 they actually did the work that I would call  
16 the preliminary work, which was reviewing the  
17 petition -- which included an extensive lot --  
18 amount of documentation, fair amount of  
19 supporting documentation, it was a reasonable  
20 amount of -- of effort and so forth involved  
21 and we'll be talking about it later and I think  
22 John has a presentation on it. I think we'll  
23 maybe have a better idea what was involved  
24 there, but it's not -- again, I think it's  
25 being prepared without trying to avoid sort of,

1           you know, going down -- taking false steps or  
2           putting too much effort into something that's  
3           not needed. At the same time, I think it can -  
4           - rather than having to have a delay for four  
5           or five weeks, whatever, for them to go through  
6           that same process and for -- for us to get  
7           ready for the review, I -- I think it -- it can  
8           be helpful. And it also can be helpful for us  
9           deciding not -- that further review by our  
10          contractor on the petition is not necessary, or  
11          that they really only need to focus on one or  
12          two key issues and that they don't need to --  
13          to do additional work.

14       **DR. ZIEMER:** Any other questions?

15                               (No responses)

16       **SC&A SEC TASK UPDATES**

17           Then I think we're ready to hear from John  
18           Mauro as far as the SC&A -- sort of their half  
19           of this. And John, I -- we have a handout, I  
20           think. Is this called SC-- SC&A presentation  
21           on comparison of SEC evaluation guidelines  
22           prepared by the Board?

23       **DR. MAURO:** That's it.

24       **DR. ZIEMER:** Okay, you should all have that.

25       **DR. MAURO:** Am I live? Kathy, could you get

1           that -- thank you.

2           Before I put my slides up, the discussion that  
3           you had is sort of like one step above my  
4           presentation, so let me just make a few  
5           comments regarding what I would call the big  
6           picture, 'cause I really had a presentation on  
7           the small picture.

8           From the big picture, if you recall when we  
9           wrote our proposal of work related to Task V,  
10          we tried to make a distinction between focused  
11          reviews and full reviews. And I would say that  
12          the concept of a full review at that time when  
13          we sent that -- which was August 16th, 2005 --  
14          was that this is going to be an awful lot like  
15          a site profile review. It's full review and  
16          it's a -- I call it a monolithic piece of work.  
17          Now -- now we've actually gone -- we're --  
18          we're basically Ames, Rocky, Y-12, and the  
19          distinction is not a real distinction between  
20          full and focused, in my mind. What I really  
21          think we have here is I think very much so the  
22          concept that was laid out both in the Board's  
23          procedures or guide-- I would say criteria that  
24          -- that it's good to think of the Board's  
25          document as a criteria document and SC&A's

1 document as a set of procedures that implement  
2 those criteria, and that's what this -- this  
3 presentation's about. But I for one would say  
4 what we're seeing is the level of effort, the  
5 issues that we address, unfold in an iterative  
6 process with the working group and the Board.  
7 So to designate one particular SEC petition as  
8 a full-blown review and another one as not, I  
9 think what happens is even the ones that we  
10 call a full-blown review will very quickly  
11 emer-- evolve into a focused review, so -- for  
12 example, on Ames we -- a team has read the  
13 petition, has read -- and you're going to hear  
14 more about this specifically -- has read oh,  
15 maybe 70 or so documents, has held a lot of  
16 dialogues with the petitioners. Okay? Total  
17 investment, 200 working hours. Okay? So  
18 relativ-- it was a relatively large document,  
19 so there -- so that investment was made and --  
20 now the question becomes is -- okay, where do  
21 we go from here. You're going to -- you're  
22 going to hear a presentation of what are the --  
23 some of the issues that at this point in time  
24 appear to be emerging that we need to talk  
25 about. But do you see what just happened? It

1           turned -- SE -- Ames is going to turn into a  
2           focused review.

3           Now that may be very well because by and large  
4           the petition has been granted and there are --  
5           but there are certainly some issues and you'll  
6           hear about that by Hans. But what I think is  
7           going to happen is the -- is large, these six  
8           full-blown petition reviews are going to go  
9           through the same process, and we're very  
10          quickly going to get to the point where we have  
11          a dialogue with the working group and start to  
12          zero in on the issues that we think are  
13          critical. So there's going to be this 200 work  
14          hour investment that's going to be made up  
15          front, which is basically what we did on -- on  
16          Ames, and then we're going to start to zero in  
17          on Ames and -- so all of a sudden it moves into  
18          the focused review. The level of effort is  
19          going to be dictated by the process of finding  
20          those issues and then -- and investigating  
21          them, interacting, re-investigating.  
22          That's exactly what's happening on Y-12. In  
23          fact -- something interesting. Y-12 -- I'm  
24          still operating. We'll get to my slides in a  
25          minute. Y-12, something interesting happened.

1 We envisioned when we wrote our proposal of  
2 work that says okay, we're about to move  
3 forward. We allocated 1,000 work hours to the  
4 full-blown review of Ames. So far we only used  
5 200. How much more are we actually going to  
6 use? It's going to very much depend on the  
7 dialogue we engage in right now. On Y-12 we  
8 said -- we said well, why -- wait -- Y-12,  
9 you're in good shape. We will review -- we  
10 were -- we had a site profile. We were I don't  
11 know how many months into issue resolution on  
12 the site profile. We're at a point where we --  
13 we already identified the three or four issues  
14 that I think there was general consensus, but  
15 it hasn't changed very much on -- on what the -  
16 - what the issues are, so -- so we said well,  
17 you know, we're in -- we're in good shape on  
18 knowing what the issues are on Y-12 and now --  
19 and -- and we laid out a proposal and we said,  
20 you know, we think we could do this in 200 work  
21 hours. Well, I'll tell you right now we're up  
22 to 400 work hours, so we didn't -- so we're way  
23 under budget on Ames, but we're way over budget  
24 on Y-12.

25 Now why has that happened? Okay. You know,

1           well, what happens is as the -- as you unpack  
2           the issues and -- and I don't know how many  
3           workgroup meetings we had, you know. Each one  
4           is a day's worth of work which triggers --  
5           well, we'd better look a little further into  
6           this and -- and there's a tracking system, and  
7           each one of those items become items that need  
8           to be closed out and tracked. Now as it turns  
9           out, in my opinion, probably the majority of  
10          to track those issues lies with NIOSH, but of  
11          course, as you know, as SC&A tracks and to the  
12          degree we feel necessary is a judgment call.  
13          But right now we're at the point where I think  
14          we're about, you know, pushing 400 work hours  
15          on Y-12.  
16          You're going to -- now you're going to hear --  
17          now -- we're basically done. You've -- you've  
18          received our evaluation report now, and that  
19          really, within the scope of Task V, is the end  
20          product. But I have a funny feeling what's  
21          going to happen is out of those 11 or 12 issues  
22          that we're going to be talking about shortly  
23          we're going to see that there are maybe three  
24          or four that are still alive and well. There's  
25          a lot there we can put to bed. By the way, the



1           lesson learned is yeah, starting the process  
2           early was great because -- think of it, the  
3           evaluation report, when did it come out?  
4           Okay. It came -- now -- and we're -- and we're  
5           -- as far as I'm concerned, we are way down the  
6           road in -- in assessment and analysis of those  
7           issues. Many of the issues -- and you'll hear  
8           more about it -- we have come to -- to a  
9           sensibility, and I think that this is a  
10          tractable. It's not a -- and others, though,  
11          say wait a minute, we still have some problems.  
12          So -- but we've delivered our product and we're  
13          at that point in time, which I would say maybe  
14          we're 80 percent home on -- on -- I'm  
15          speculating, but -- and so there -- so the --  
16          starting early on Y-12 I think brought us a lot  
17          because here we are, you know, two weeks into  
18          after the evaluation report was -- was  
19          published. We've got, I think, the majority of  
20          the issues well in hand and -- there's still  
21          more work to do and we're going to hear more  
22          about that, so it was very wi-- not only was  
23          the criteria document which embraced that  
24          concept I think the correct decision, but we're  
25          actually realizing a benefit. I'm -- I know

1 we're really moving aggressively forward in  
2 getting to the bottom of all the issues on Y-  
3 12.

4 Now certainly when the day is over we're not  
5 going to be in full agreement on everything. I  
6 know it.

7 Now Rocky, it turns out, we -- we put in place  
8 500 work hours so with Rocky we're -- when we  
9 first said well, Rocky was nowhere near the  
10 level of maturity in terms of addressing all  
11 the issues, so we felt at that time that since  
12 we -- we were just beginning to look at and  
13 unpack the issues, the site pro-- the site  
14 profile issues on Rocky, that it was going to  
15 take a lot more work. Plus, as you know, the  
16 Rocky site profile -- I'm sorry, SEC petition  
17 itself is -- is quite a large document. But  
18 right now, at this point in time -- and you're  
19 going to hear a report from Joe Fitzgerald  
20 related to where are we on that -- we haven't -  
21 - we've only burned up maybe 250 work hours on  
22 -- on -- on Rocky. We set aside 500.

23 Now you're going to hear more about where --  
24 now you -- you folks know that on Rocky, and  
25 you're going to hear about this, big issue is

1 data reliability. We've had lots of conference  
2 calls, we want to run down these issues 'cause  
3 when all is said and done, read that af-- you  
4 read the affidavits, you read the site -- the  
5 SEC petition, everything stands on that rock.  
6 That is, that data better be reliable and be  
7 trustworthy, and a lot of the allegations that  
8 are in there need to be followed up and closed  
9 out, so there's where the investment needs to  
10 be made. But you're going to hear also that a  
11 large investment was also made in the -- the  
12 high -- the high fire pro-- the high fired  
13 plutonium issue. We've -- we've looked at the  
14 -- the americium issue. You're going to hear a  
15 lot about that and where we are, and we've made  
16 a lot of progress there. You're going to hear  
17 about that, and Joyce is -- Joyce Lipsztein is  
18 here today who did a lot of work just on the  
19 high fired.

20 So -- but what I'm trying to get at is that  
21 when you step back, everything unfolded in a  
22 way that was different than we anticipated.  
23 Ames, 200 work hours invested and where -- and  
24 you're going to hear where we are, but we're  
25 well down the road on that. Y-12, about 400

1 work hours, we're well down the road on that.  
2 Rocky, we invested about 250 and I would say  
3 maybe we're halfway home on that so -- I mean -  
4 - I'm try-- it -- it's -- it's very much a  
5 living process. All right? But I'd be the  
6 first to say beginning the process as soon as  
7 the document is qualified, the evalu-- the  
8 petition is qualified, is the only way to go.  
9 Could you -- 'cause it -- you could almost  
10 imagine if we were to start the pro-- if we had  
11 started this process when the evaluation report  
12 out, we would be months behind , and I have to  
13 say we're months ahead of the schedule. I  
14 think that -- I'm optimistic that we're --  
15 we're -- you know, we're -- we're not that far  
16 away from being able to give you the  
17 information you need to vote. I think more  
18 work needs to be done. You're going to hear  
19 more about that. And I think that starting  
20 that process early is going to provide the  
21 information -- for example, the evaluation  
22 report that you just received is -- we're  
23 going to get into that and you're going to be  
24 able to get a sense of where and where --  
25 well, we're really not there yet. Okay?

1           Now given that, I'd like to move on to -- get  
2           down into the weeds a little bit about my  
3           presentation. What -- what my presentation  
4           does is -- I'm just not quite sure how to  
5           advance these things.

6                               (Pause)

7           **DR. MELIUS:** Push the arrow key.

8           **DR. MAURO:** Okay. Well, on -- okay, help me  
9           out.

10          This presentation's seven slides and it says  
11          are the SC&A draft -- are the S&A (sic) draft  
12          SE-- SEC evaluation procedures consistent with  
13          the Board's evaluation criteria. The question  
14          I asked myself last week when I put this  
15          together to say okay, I had the Board's  
16          document and I -- and go on to the next slide.

17                               (Pause)

18          That's the one. Okay, good. I'm not sure if  
19          we can go through any of this easily or not,  
20          but you have the hard copy.

21          What I did is on the left-hand side are the  
22          Board's criteria. That is if you were to read  
23          the document the Board prepared, it talks about  
24          timeliness and -- and then on the right-hand  
25          side is where in our procedure do we -- do we

1 address timeliness. So -- so that you could  
2 see whether or not there is a correspondence  
3 between the criteria and the procedures that  
4 effectively have been written to implement  
5 those criteria and to evaluate compliance with  
6 those criteria.

7 You're going to find that as you move down -- I  
8 put the page numbers so that under timeliness,  
9 the answer is yes, we have what -- we say a lot  
10 about timeliness and we talk about things that  
11 we're going to -- that we think need to be done  
12 procedurally to ensure that there is a timely  
13 review of the SEC petition and the evaluation  
14 report, and it's on page 6, 14 and 20 of our  
15 document.

16 Same thing goes with fairness, there -- there's  
17 a criteria called fairness, and the answer is  
18 yes, we do have -- we do address this issue of  
19 fairness and how we're going to go about doing  
20 it.

21 But let me say something about these  
22 procedures. In the world of procedures there  
23 are prescriptive proc-- procedures and there  
24 are what I call more performance-based  
25 procedures. In other words, our procedures are

1 not highly prescriptive. That is, we don't  
2 have numerical criteria, the kinds of things we  
3 were talking about before. We don't have very  
4 explicit things that you must do, must check.  
5 It's very much left up to the collective  
6 judgment of the working group on how far are we  
7 going to go to chase down particular issues.  
8 So in a way our procedures are more  
9 performance-based than prescriptive, but we can  
10 make them more prescriptive and we need -- and  
11 I think this is a subject that needs to be  
12 discussed.

13 For example, you're going to hear a lit-- this  
14 business of the 250 days. Here -- here --  
15 let's say we have an SEC petition that -- where  
16 it's -- it's granted, but there's some question  
17 that -- wait a minute, what about the  
18 individuals that worked there less than 250  
19 days, are they going to be just denied? Right  
20 now -- and -- right now the guidance we have is  
21 well, if there was a potential for exposures  
22 that were comparable to a criticality, yes,  
23 they get compensated. But you know what? I  
24 think we all agree that -- that we -- that the  
25 procedures that govern -- the guidance that

1           governs whether or not that compensation issue  
2           should be -- that person should be compensated,  
3           we need to -- we need to talk about that some  
4           more. Something equivalent to a criticality  
5           accident is, in my mind -- and this is in our  
6           report, part of our report -- we think that  
7           there are other -- there are procedures we  
8           could develop that would help in making that  
9           decision. In fact, quite frankly, the bottom  
10          line is that if the potential exists that over  
11          a relatively short period of time a person  
12          could have gotten exposure which could have  
13          kicked him over a POC of .5, as far as I'm  
14          concerned, that's your criteria, not this  
15          criticality issue, but that's for discussion  
16          amongst the Board. If a person was -- in  
17          theory, if the data showed such events occurred  
18          where over a short period of time a person  
19          could have got enough of an exposure that in  
20          theory could have kicked him over the  
21          probability of causation of .5, well, that  
22          probably is one criteria you want to consider.  
23          Right now we haven't talked about that.  
24          Let me move on. The next item on the list is  
25          understandable. That was one of the criteria



1 in the document that was prepared by the Board  
2 is that well, you have to be able to understand  
3 the document. All -- all individuals, all  
4 stakeholders, all interested parties -- well,  
5 right now we don't have anything -- on the  
6 right-hand side you'll see we don't talk about  
7 that so we're on that particular matter.

8 **UNIDENTIFIED:** Let's try this one.

9 **UNIDENTIFIED:** Consistency.

10 **DR. MAURO:** Okay, consistency. Okay. We do  
11 cite consistency as a criteria (sic) on pages  
12 12, 13 -- no, item number 12 and 13 on page 22.  
13 How much more we need to talk about  
14 consistency, how much cri-- do we need to  
15 develop some type of measure of consistency?  
16 Right now our procedures talk about it, but  
17 don't really go very far with it. And I think  
18 we need to decide whether we need to develop  
19 more -- more -- more guidelines about -- and  
20 what -- what types of checks you would do -- go  
21 through. We've made reference to certain  
22 cross-checking in our procedure that would --  
23 that looks for cri-- consistency, not only  
24 within a particular document, say the  
25 evaluation report or a site profile, but also

1           amongst a whole array of documents, so  
2           consistency is very much addressed.

3           **DR. ZIEMER:** John, let me insert here, actually  
4           this whole document -- one of its main intents  
5           is to ensure consistency, so whether or not it  
6           has to be built in beyond that, I think -- I  
7           think that's a -- sort of the basis for even  
8           doing this and --

9           **DR. MAURO:** That's true, but -- but how do --  
10          you know, how do you -- see, in a procedure,  
11          how do -- what do you do, what -- what does --  
12          what does any contractor do when they're  
13          looking at a document, look -- you know, what  
14          do you --

15          **DR. ZIEMER:** I understand. You're -- you're  
16          looking at some maybe lower levels of  
17          consisten--

18          **DR. MAURO:** Lower -- yeah, how far down do --

19          **DR. ZIEMER:** This is intended to do exactly  
20          that.

21          **DR. MAURO:** Exactly that. Okay. Board -- now  
22          again -- . Scope, the guidelines talk about  
23          scope, pedigree of data, methodology,  
24          relationship to other sources. Now it turns  
25          out for -- the first three items, scope,

1 pedigree and methodology, we do talk about it  
2 but we don't get very prescriptive about data  
3 quality. And -- and I mentioned something  
4 before when I went up to the mike where there  
5 might be a procedural thing we could do  
6 statistically when we're looking at data and  
7 data quality and sampling of data. When you  
8 have a body of -- a dataset, and you're  
9 concerned about its validity, whether or not  
10 it's robust, I think we have -- we have a  
11 situation do we want to implement a  
12 quantitative cri-- guideline that effectively  
13 puts numbers to the question how sure -- I mean  
14 how confident do you want to be -- do you --  
15 must be to -- that the amount of bad data is  
16 extremely small. In other words, ultimately  
17 that's what we're saying. We want to make sure  
18 the dataset that we're working, whether it's  
19 the CER database or whatever database we're  
20 working with, we -- we want data quality. The  
21 question becomes well, how much is enough and  
22 what's good enough. Right now -- we did an  
23 analysis that shows well, the 22 samples that  
24 were taken for the Y-12 CER database  
25 demonstrates that you can be 90 percent certain

1           that less than -- that the data -- if there is  
2           some faulty data in there, it's less than ten  
3           percent. The question is, is -- is that good  
4           enough? Right now we haven't talked about  
5           that, what's good enough, so what I'm getting  
6           at is we talk about that in qualitative terms  
7           in our procedure, but we really don't get into  
8           quantitative determination, prescriptive  
9           methods. You might want to do that.  
10          Intern-- we have nothing -- we really don't  
11          have any guidance on the last item, internal  
12          consistency, so that's why you see it blank  
13          after that.  
14          One of the questions I'm -- I guess I'm going  
15          to leave with -- with the Board is should we  
16          rewrite our procedure so that it has one-to-one  
17          correspondence to the criteria, so that in  
18          effect the procedure reads like this. Here are  
19          the Board's criteria, which of course mirror  
20          back to the Act, and then the next in  
21          hierarchical fashion, perhaps our procedure  
22          should be written in a way that there is a one-  
23          to-one correspondence between the Board  
24          criteria and the procedures we're going to be  
25          using to assess whether or not those criteria

1           are in fact met.

2           Right now the document that we delivered to you  
3           before this document came out is not written  
4           that way. In other words, it was very hard for  
5           me to do -- make this table. I had to re-- in  
6           other words, to read the Board's criteria and  
7           to read the document that we prepared and see  
8           how they met, you know, it took reading my  
9           document about ten times to keep -- to find the  
10          piece that goes to that. It would probably be  
11          a good idea to have it flow nice and smoothly  
12          so it's not so much work to see if in fact our  
13          procedures in fact track the Board's criteria.  
14          Let's keep going.

15          Okay, the next is represent-- the next set of  
16          criteria the Board prepared is area of the  
17          facility -- basically are all the areas of the  
18          facility covered, are all the time periods  
19          covered, are all the types of workers and  
20          processes covered that is in -- in -- in the  
21          document that is being reviewed. Well, the --  
22          the vast majority of our procedures goes to  
23          that, so in effect our procedure really, when  
24          all's said and done, was written to address --  
25          to make sure that -- that the evaluation report

1           or -- or the actual petition is -- is crisp  
2           with respect to identifying the areas, time  
3           periods and the types of work and whether or  
4           not you can or cannot do dose reconstruction  
5           for all these areas, time periods and subgroups  
6           of workers, so really -- in one respect I would  
7           say -- if anything, our procedures were written  
8           for that particular group, the representative  
9           piece of the Board's procedure.

10          Oh, okay, feasibility. This -- these matters  
11          of feasibility, timeliness, avoidance of  
12          disparate treatment of claimants, sample dose  
13          reconstruction, in my mind they all are  
14          accomplished through the sample dose  
15          reconstruction. In other words -- for example,  
16          if -- if the evaluation report prepared by  
17          NIOSH lays out -- oh, well, we -- you know, we  
18          believe it's feasible to do it and this is the  
19          method we're going to follow, talking about  
20          whether it was chest counts or urinalysis, and  
21          we -- we can -- we think we can do it pretty  
22          easily. That's where timeliness comes in, that  
23          -- we know how to do it.

24          I think in the end, in order to evaluate  
25          whether or not it is feasible to reconstruct

1 doses in a timely fashion and don't come up  
2 with disparate results that don't make sense  
3 between different groups of people, it's the --  
4 the methodology as proposed, it's not apparent  
5 -- it's not going to be self-evident from the  
6 methodology that it easily . What will be --  
7 where the rubber meets the road is the sample  
8 dose reconstructions. I think that's critical  
9 to do demonstration that yes, it's feasible and  
10 can be done in a timely fashion. And our --  
11 our procedures don't talk about that. It's  
12 very important. Sample problems that address -  
13 - that demonstrate yes, you can do it. So in a  
14 way -- and this is an important judgment --  
15 what I'm saying is that you could have a lot of  
16 good intentions and we believe we can do -- we  
17 have the data, we believe we have the  
18 methodologies -- I'm speaking as NIOSH now --  
19 to do X, Y and Z for all these groups and  
20 subgroups -- and you're going to hear more  
21 about that when we get into Rocky and Y-12 --  
22 but until you see the actual application -- one  
23 -- one of the things that -- I'm sorry for  
24 taking so long, but one of the things I  
25 originally was thinking about was saying well,

1           listen, as long as there's a sense that yeah, I  
2           think you can do it, you don't have -- in other  
3           words, as long as a demonstration -- an  
4           argument can be made yeah, it looks like it's  
5           feasible to do it, at that point you could stop  
6           and say well, a judgment is made yeah, I think  
7           -- I think you can do those calculations given  
8           these data.     But what's happening is we're  
9           starting to realize that -- I'll give you an  
10          example.

11          The exotic radionuclides, you're going to hear  
12          a lot about the exotic radionuclides Y-12.   All  
13          right?   And in principle -- during our  
14          conference call on the 20th NIOSH said well,  
15          listen, we have lots of incident reports with  
16          lots of data that will allow us to reconstruct  
17          the doses to any workers who might have been  
18          exposed to some of these exotic radionuclides  
19          that were handled in gloveboxes or as part of  
20          the Cyclotron operations and -- and -- and you  
21          know what, in principle that sounds good.   So  
22          one could argue -- we -- we believe that.   We  
23          believe that there are incident reports out  
24          there and if you go into it you can identify  
25          the workers that were exposed, and from the



1 incident reports there's enough data for you to  
2 be able to reconstruct the dose that way. You  
3 know what? I'm starting to think that -- I'd  
4 like to see those incident reports. Now they  
5 did provide one. I'm almost like taking the  
6 wind out of the sails of Arjun. I think we  
7 need to see enough of those. How much is  
8 enough is a tough question, but I think that's  
9 where the working group comes in. At some  
10 point the working group has to say I think  
11 we've seen enough to feel convinced that yes,  
12 it can be done.

13 So regarding this slide, what I'm getting at is  
14 feasibility and timeliness and avoiding  
15 disparate treatment of claimants all come down  
16 to the sam-- the sample dose reconstructions.  
17 You could have good intentions, could make good  
18 arguments, but until we see it done we're  
19 really not that quite sure.

20 Okay, I think this is the last one --  
21 procedural. There -- under the Board criteria  
22 there was the last two pages that was called  
23 procedural. What was called a petition  
24 evaluation -- NIOSH would provide an evaluation  
25 plan that reflects the criteria provided by the

1 Board. We very much embrace this on page 16 of  
2 our procedures, but one of the problems we -- I  
3 think this was discussed earlier. How much can  
4 you really expect NIOSH to be able to compile  
5 in their evaluation plan? That is, you know,  
6 ideally, one -- once the document is qualified  
7 and then an evaluation plan before it, there'll  
8 be lots of material in the evaluation plan.  
9 But I suspect that's not going to be very  
10 possible. I think the reality of the situation  
11 is that as NIOSH moves through the process of  
12 evaluating the petition, SC&A would -- working  
13 through the working group -- would be there in  
14 almost real time, just exactly the way it's  
15 been going on at Y-12 and Rocky, to -- to  
16 evaluate the unfolding nature of the issues as  
17 -- and so I think -- our original intent under  
18 our procedure was that there would be a whole  
19 bunch of great material we could look at as  
20 soon as the evaluation plan -- as soon as the  
21 document was qualified. I think the reality is  
22 that's probably not going to happen. I'd  
23 certainly like to leave that to NIOSH to say  
24 whether they're in a position to do that or  
25 not, but ideally the more information that can

1           be made available to the working group as soon  
2           as the document was qualified, the better  
3           position everyone is going to be in to start  
4           the process that, so I'm not quite sure how --  
5           whether or not the fir-- the petition  
6           evaluation -- whether it could start -- how  
7           early it could really start.

8           Site profile review. It says if a site profile  
9           exists, it should be reviewed before the SEC  
10          petition is evaluated. Well, we say that --  
11          exactly the same thing on page 26 of our  
12          report, and of course. And I think that we  
13          very much would embrace that. That philosophy  
14          is exemplified by the way in which we handled  
15          both Y-12 and Rocky. So I -- with this  
16          presentation, trying to show that there is a  
17          large degree of correspondence between the  
18          criteria that the Board prepared and the  
19          procedures that we prepared. However, it's --  
20          it probably needs a re-write of the procedures  
21          so it tracks the criteria in a little more  
22          systematic way. And there's also some  
23          discussion on how explicit or prescriptive we  
24          should get.

25          I'm concluding with two important observations,

1           some of which have already mentioned. One is I  
2           think we need to talk a lot more about this --  
3           this worker who was there less -- who -- who's  
4           a member of a -- who's worked at a facility  
5           such as the Ames site, was only there for a few  
6           days -- less than the 250 days -- and what  
7           criteria are we going to -- we going to use to  
8           determine that -- whether or not his exposure  
9           was significant enough in that short period of  
10          time. I don't think those criteria exist right  
11          now. I think a little bit of work needs to be  
12          done on that.

13         Second, statistical criteria for data adequacy.  
14         Well, you've heard a little bit about that  
15         before. That is, when you go in and start to -  
16         - there -- if there is a -- some question,  
17         especially if it's raised by the claimants that  
18         there is distrust in the robustness, validity,  
19         completeness of the dataset, then certainly  
20         explicit steps need to be taken to -- to  
21         convince yourself and the petitioners whether  
22         or not there's a problem with the data  
23         validity. I think what NIOSH has done in  
24         Appendix 1 for Y-12 is a very good example of  
25         the kinds of things that need to be done. The

1           sampling on those 22 urine samples that they  
2           took out of the 14,222 is exactly the kind of  
3           thing that needs to be done.

4           And then -- and then -- now the only problem we  
5           have, though, is that -- the statistical  
6           acceptance criteria. Okay, all I can say right  
7           now is that tells me that I'm 90 percent  
8           confident that less than 10 percent of the --  
9           of the samples might be a problem. We need to,  
10          I guess, come to some kind of judgment is that  
11          good enough, and that concludes my  
12          presentation.

13       **DR. ZIEMER:** Thank you. Thank you very much,  
14       John. We're ready to open this up for  
15       comments, and I think this really pertains to  
16       not only John's presentation but how it meshes  
17       with the criteria that Jim -- group developed  
18       and how they interact here. And I might  
19       observe that, for example, on -- on the issue  
20       of petition evaluation where we say NIOSH  
21       should provide a plan that reflects certain  
22       criteria, that really is directed toward NIOSH  
23       as opposed to a directive toward SC&A. So if  
24       you -- if you look at SC&A procedures, then you  
25       have to say well, what is it you do that

1 relates to that? Maybe what you do is  
2 something like looking at -- to see whether or  
3 not in a petition that has actually occurred,  
4 something like that. But that -- that's a  
5 detail and really you're saying what should we  
6 do with this; should we change it in some way  
7 so that there's a more of a one-to-one  
8 correspondence.

9 Jim?

10 **DR. MELIUS:** Yeah, what I would propose, what -  
11 - want to observe, I think NIOSH has changed  
12 the formatting and the approach for their  
13 evaluation reports to reflect those guidelines.

14 **DR. ZIEMER:** Uh-huh.

15 **DR. MELIUS:** So I think that SC&A should sort  
16 of develop a procedure document that reflects  
17 the procedures and the -- the general criteria  
18 as -- as outlined in -- in those guidelines,  
19 also, 'cause their current document does not.  
20 And I think for sake of completion --  
21 completeness and so forth, it -- should NIOSH  
22 not address particular factor or something,  
23 that that -- want to pick up on that, but that  
24 -- you also should have procedures in place  
25 that -- that -- that address that. I don't

1 think that we want your procedures to be more  
2 prescriptive at this point in time. I find it  
3 -- hard-pressed to think of a statistical  
4 approach or whatever that's going to be  
5 appropriate or applicable to all evaluations  
6 and so forth. I think -- in some cases the  
7 issues are well, how do you take a samp-- you  
8 know, a small sample out of a huge number of --  
9 of observations, but in other cases there's  
10 issues -- are particular years missing and  
11 things like that that I -- don't lend  
12 themselves as readily to an overall statistical  
13 approach. And I don't think -- I think we're  
14 better off dealing with those on a case-by-case  
15 basis. Certainly at this point in time -- we  
16 can, you know, maybe address that a few years  
17 from now or something, but I think right now  
18 it's a case-by-case -- and I think we'd be --  
19 I'd be -- certainly be satisfied just having  
20 your, you know, procedures, you know, follow  
21 ours -- ours better, and I think that would --  
22 would suffice.

23 **DR. ZIEMER:** So Jim, in terms of speaking for  
24 your working group, are you proposing that as a  
25 Board action, that we so direct the contractor,

1 or --

2 **DR. MELIUS:** If you and Roy and Mark agree,  
3 that's --

4 **DR. ZIEMER:** Now --

5 **DR. MELIUS:** -- then I can speak for the  
6 working group, I...

7 **DR. ZIEMER:** We actually, since -- since that  
8 formal recommendation never did reach us in  
9 time, but --

10 **DR. MELIUS:** Well, and actually we had  
11 originally planned to have a meeting of the  
12 workgroup while we're here, and whoever put  
13 together the agenda sort of rushed us through  
14 here a little bit.

15 **DR. ZIEMER:** Well --

16 **DR. MELIUS:** We didn't have time for a meeting  
17 of the workgroup before --

18 **DR. ZIEMER:** But we've heard the issues and --

19 **DR. MELIUS:** Yeah.

20 **DR. ZIEMER:** -- Roy, do you want to speak to  
21 this?

22 **DR. DEHART:** Actually if one will read the  
23 document that SC&A has prepared on -- in this  
24 regard, the procedures are almost there. In  
25 fact, I don't know that we need the contractor



1           continue that. You've done the job. I think  
2           it's a page that we're talking about that's 1,  
3           2, 3, 4 with A, B's and C's and that's it.  
4           It's -- it's essentially been done.

5           **DR. ZIEMER:** Other comments? Wanda.

6           **MS. MUNN:** Am I missing a copy of that proposed  
7           procedure?

8           **DR. ZIEMER:** The SC&A procedure actually was  
9           distributed before our last meeting and --  
10          Roy's got it there.

11          **DR. DEHART:** It's dated November --

12          **DR. ZIEMER:** Yeah, it was last fall.

13          **DR. MELIUS:** last fall in an e-mail.

14          **DR. ZIEMER:** It's -- it's -- we've had it --

15          **MS. MUNN:** Oh, my. Oh, my.

16          **DR. ZIEMER:** Yeah.

17          **MS. MUNN:** No wonder it's not here.

18          **DR. MELIUS:** Just -- if this helps in terms of  
19          chronology, they -- their proposed procedures  
20          came out in late November of last year. It was  
21          the same time we were discussing the  
22          guidelines, so we never really took up their  
23          procedures 'cause we were -- our meetings  
24          around that time were dealing with the overall  
25          guidelines for reviewing the proc-- you know,

1 NIOSH evaluations of SEC petitions.

2 **MS. MUNN:** Uh-huh.

3 **DR. MELIUS:** So we're really coming back around  
4 to addressing that, and -- and I would propose  
5 that they, you know, do the appropriate  
6 revisions. I agree, I don't think they're --  
7 you know, they'd take a lot of effort, but take  
8 a little bit of effort and then re-present that  
9 to the Board and go from there. I think in  
10 essence we're -- they're following those  
11 already is de facto because of the evaluation  
12 reports they've received from NIOSH 'cause  
13 NIOSH is basically addressing those -- those  
14 items in -- in their reports.

15 **MS. MUNN:** Again, perhaps I need to be brought  
16 up to speed. I seem to recall early on when  
17 this Board first met that we took the position  
18 we were not going to address any decision that  
19 Congress had made with respect to this Act. Is  
20 not that 250-day prescription a part of the  
21 Act?

22 **DR. MELIUS:** Can I --

23 **DR. ZIEMER:** Yeah --

24 **DR. MELIUS:** -- it's part of the Act only as it  
25 applies to the SEC cohort groups that were

1 included in the original Congressional Act --  
2 original EEOICPA Act, so -- and that applied to  
3 the enrichment facilities --

4 **DR. ZIEMER:** Yes, but there is a --

5 **DR. MELIUS:** -- and so forth so -- so -- and  
6 now the second place it's included is in the  
7 regulations -- for doing that. It was not --  
8 it's in the part of the regulations that deal  
9 with health endangerment, and so our  
10 guidelines, the guidelines that the Board --  
11 the workgroup did and the Board has sort of  
12 tentatively adopted did not address the  
13 endangerment issue, so it did not address the  
14 250 days 'cause that's sort of a separate -- a  
15 separate issue and I had actually in our  
16 workgroup call -- I can't remember if you were  
17 on it during that time period or not --  
18 -- actually proposed that we needed to discuss  
19 that -- that issue relevant to these issue --  
20 but it's sort of a separate discussion here and  
21 -- and what's in the SC&A procedures and what's  
22 in our -- our guidelines doesn't even talk  
23 about 250 days --

24 **DR. ZIEMER:** Well, I believe our guidelines do  
25 in fact talk about 250 days, and Jim can speak

1 to that, but it also does allow for a shorter  
2 period of time in episodic events that are --  
3 like criticality events, so there is already a  
4 provision. And I thin in the case that you're  
5 talking, John, then the argument would be to  
6 what extent are these events like criticality  
7 in that they deliver large amounts of dose in a  
8 brief period of time. So as I understand our  
9 current -- it would be Part A(3), I guess --

10 **DR. MELIUS:** Yeah.

11 **DR. ZIEMER:** -- it actually does allow for  
12 that. But Jim can speak to that.

13 **DR. NETON:** Right. The guidelines that were  
14 provi-- that were drafted allow for 250 days by  
15 default. That is essentially analogous to what  
16 Congress used in the legislatively-mandated  
17 cohorts, with the exception that I might add  
18 Amchitka did not have a 250-day requirement in  
19 the legislatively-mandated cohorts. But -- but  
20 by definition the 250 is a default, unless one  
21 can arrive at a -- some conclusion that there  
22 was something on the order of a criticality,  
23 the idea being that, you know, can we put a  
24 plausible upper bound on this dose  
25 reconstruction. If not, you look and see if

1           there were episodic type exposures versus a --  
2           a huge, one-time exposure, so to speak. At  
3           that point then NIOSH would go and evaluate  
4           would a lesser time period be applicable.  
5           I'm a little concerned when Dr. Mauro was  
6           proposing applying litmus tests such as  
7           probability of causation calculations to allow  
8           for shorter time frames because almost by  
9           definition you get in a circular logic. You  
10          arrive at the conclusion that you can't  
11          plausibly bound the dose reconstruction, yet  
12          you're using dose reconstruction methodology  
13          calculations to determine the -- to bracket the  
14          time period of the class. So you get into some  
15          real conundrums going down that path and I just  
16          advise the Board that we've thought about this  
17          long and hard and this is where we ended up and  
18          our -- our -- our rule is for those reasons.

19       **DR. ZIEMER:** And I might also remind the Board  
20       that we had a discussion I think at the last  
21       meeting relating to the 250 days, and that was  
22       does it apply, for example, to the Pacific  
23       Proving Grounds where perhaps the individuals  
24       were in a sense exposed 24 hours a day rather  
25       than eight, and so do we mean 250 working days

1           and therefore talk about some kind of a  
2           weighted average like you would compare working  
3           level days for miners in terms of what a  
4           working week is.

5           **DR. WADE:** Right. Just to keep things sort of  
6           sorted, first of all, to the issue that Dr.  
7           Melius raised, the SC&A procedures and working  
8           group procedures really have never dealt with  
9           the issue of 250 days, and that's fine.  
10          Jim did mention when the working group met that  
11          he felt the Board should discuss the 250-day  
12          issue and it's on the agenda for that purpose.  
13          Just to -- and I've done some research with our  
14          legal people, the dose re-- excuse me, the SEC  
15          rule does talk about, under health  
16          endangerment, either presence or 250 work days.  
17          When I talk to legal people within HHS, they  
18          tell me that there is room for interpretation.  
19          That has yet to be interpreted, and the  
20          Secretary would accept from the Board  
21          recommendations that were consistent with those  
22          language-- that language, but neither of those  
23          statements is completely prescriptive.  
24          So it does say 250 work days. If in your  
25          deliberations you want to talk about what that

1 means in terms of actual hours, that's fair  
2 game. If you want to go to the other side and  
3 say that you think presence of a certain  
4 duration given events that may have taken  
5 place, is an appropriate criteria, that's fine.  
6 You can do that. But it's not part of the  
7 discussion of the SEC procedures that SC&A has  
8 developed or the working group has developed,  
9 but it is an important issue for this Board to  
10 consider as it moves forward. I think it'll be  
11 framed somewhat tomorrow when you talk about  
12 the Nevada Test Site.

13 **DR. ZIEMER:** Okay. Jim, did -- you put your  
14 flag back down so I guess your comment was  
15 taken care --

16 **DR. MELIUS:** Well, I don't know whether I'll  
17 further confuse Wanda or clarify things, so --

18 **MS. MUNN:** That's easy to do.

19 **DR. MELIUS:** Well, it's easy for me to confuse  
20 people, too, so -- but we had asked that this  
21 be -- these two issues be put on the agenda  
22 separately for discussion, and actually to hear  
23 from NIOSH on -- to get some input from them on  
24 what their current process is for making  
25 determinations on non-SEC cancers and this 250-

1 day health endangerment-related issue, so...

2 **DR. WADE:** But both of these are fair game for  
3 the Board to discuss and offer the Secretary  
4 advice on.

5 **DR. ZIEMER:** Okay. I want to try to come to a  
6 little bit of closure on the SC&A document vis-  
7 a-vis our procedures. Jim, what was the final  
8 recommendation?

9 **DR. MELIUS:** Again, I -- I can put this in the  
10 form of a motion if necessary, but I think the  
11 -- the -- what I was proposing was that -- and  
12 I think John agreed -- was that we would have  
13 SC&A modify their procedures to reflect our  
14 guidelines and -- and bring that back to the  
15 Board and the Board would review that. I think  
16 we need -- do need to formally review that set  
17 of procedures.

18 **DR. ZIEMER:** Is there a second to that motion?

19 **MR. GRIFFON:** I'll second.

20 **DR. ZIEMER:** And it's been seconded. I think  
21 the understanding here would be that we're not  
22 talk-- nobody's thinking about this as being a  
23 major task. I think Roy's implied at least  
24 that this should be a very quick and easy fix  
25 to just get the...



1           **DR. DEHART:** I'll not only imply, I'll  
2           specifically state it should be an easy task.  
3           It should not be a very time-consuming task,  
4           and it shouldn't require a great many pages.

5           **DR. MELIUS:** And I would just add that we've  
6           actually already tasked them with developing  
7           the procedures. We have never accepted their  
8           procedures 'cause we were in the process of  
9           developing our guidelines, so we -- we do need  
10          to take action on it in some way so --

11          **DR. ZIEMER:** On their procedures, so whatever  
12          modifications are appropriate then would be the  
13          sense of the motion. Any further discussion?

14                               (No responses)

15          Then let's call the question. All in favor,  
16          aye?

17                               (Affirmative responses)

18          Those opposed, no?

19                               (No responses)

20          Bob Presley?

21                               (No response)

22          Motion carries. Thank you.

23          **NON-PRESUMPTIVE CANCERS**

24                               Is -- is there any -- I want to take a look  
25                               here again, on the non-presumptive cancers and

1 the 250-day, was there any formal presentation  
2 that NIOSH was expecting to make at this time?  
3 I'm not requi-- you know, suggesting that you  
4 must, but it -- it's here.

5 **DR. WADE:** I think it's important to get on the  
6 record how NIOSH is approaching this issue  
7 currently, and then the Board can react in any  
8 way it wants. It doesn't necessarily have to  
9 conclude those reactions today.

10 **DR. ZIEMER:** So this is just an update, in a  
11 sense, then.

12 **MR. ELLIOTT:** Yes, no formal presentation, but  
13 just to tell you what NIOSH's policy is with  
14 regard to SEC petition evaluation reports.  
15 It's our full intent to bring forward as sound  
16 a scientific evaluation as we possibly can in a  
17 180-day time limit that we're working within,  
18 and to provide a class definition that  
19 originates from the petitioners' definition  
20 based upon our scientific evaluation that --  
21 that we believe to -- to -- to be based on that  
22 scientific evaluation and not cause undue harm  
23 to any one member in the class or outside the  
24 class. We -- in this policy we are told we  
25 need to abide by the regulation; that presence

1           or 250 days is to be examined with regard to  
2           health endangerment and it's -- it's -- that's  
3           been our operating procedure in that policy  
4           effort and that's not to say that, you know,  
5           we're not interested in hearing what the Board  
6           had to discuss upon that or what they might  
7           recommend to the Secretary. We're certainly  
8           interested in that.

9           I would offer that in the rule-making for the  
10          SEC rule there is a considerable body of  
11          comment on 250 days and health endangerment  
12          that the Board might want to avail themselves  
13          of and refresh your memories about -- about  
14          those comments. They also go to -- there was  
15          comment provided -- in fact in one rule  
16          proposal that we offered we -- we offered  
17          something similar to what Dr. Mauro had -- had  
18          indicated where we would do cancer-specific POC  
19          type evaluation to try to determine, you know,  
20          if health had been endangered, and that was  
21          abandoned because of the variety of comments  
22          that we got on that point. So I would just  
23          mention that for the Board's consideration.  
24          Take a look at the public comment record that's  
25          there for the rule-making effort.

1           **DR. WADE:** The non-presumptive cancers.

2           **MR. ELLIOTT:** Non-presumptive cancer is -- is  
3 another policy-related matter that we've taken  
4 very -- taken to heart and given very strong  
5 consideration in how we examine, in our  
6 scientific review and evaluation of a petition,  
7 what dose we can reconstruct that would go to  
8 the non-presumptive cancer claimants that would  
9 not fit into that class. And as -- as our  
10 understanding and the development of these  
11 evaluation reports has evolved, we have learned  
12 -- we've learned through that process that we  
13 need to be very careful with how we couch our  
14 recommendations to the Secretary so that if  
15 there is a non-presumptive cancer that we can  
16 reconstruct dose for, we want to be able to do  
17 that and say that we can do that and clearly  
18 show and demonstrate how we would do that. So  
19 this -- this is a matter that yes, I think the  
20 Board needs to -- to take good, full  
21 consideration of as well in your deliberations.  
22 And when you see our evaluation reports,  
23 comment -- as you -- as you should -- to us  
24 about that. Make sure that we're clear and you  
25 have a clear understanding of what we say we

1           can't do, as well as what we can do.

2           **DR. MELIUS:** Yeah, and I know you had short  
3 notice on this, Larry, so it's not a criticism  
4 of -- of what you presented, but -- but I -- I  
5 really think on the -- the non-presumptive  
6 cancers it would be very helpful for us to have  
7 a full presentation by you or your staff on  
8 what exactly are your current procedures, with  
9 examples of -- of those, because the -- we have  
10 ventured into this area once on an SEC  
11 petition, I believe one of the Mallinckrodt  
12 petitions, on -- in making specific  
13 recommendations on this and -- and I think if  
14 we should be tempted to do so again, I think we  
15 need to be, you know, consistent with -- aware  
16 of what your current approaches are and -- and  
17 knowledgeable of those. It's -- it's, I think,  
18 a difficult area and I think we -- we need to  
19 try to address that systematically. I don't  
20 think you had time to --

21           **MR. ELLIOTT:** This was the first I heard that  
22 you --

23           **DR. MELIUS:** Okay.

24           **MR. ELLIOTT:** -- you were -- you wished to  
25 entertain such a presentation.

1           **DR. MELIUS:** Well --

2           **MR. ELLIOTT:** We offered it --

3           **DR. MELIUS:** Well --

4           **MR. ELLIOTT:** -- each one of these -- I'm  
5           sorry. Each one of these class designations  
6           have a set of circumstances around them that  
7           make them depend upon that set of  
8           circumstances, but we certainly can provide a  
9           presentation to the Board on where we're at  
10          with the current classes that we have seen  
11          added to the Special Exposure Cohort and what  
12          we're doing with regard to non-presumptive  
13          cases that don't fit into that class.

14          **DR. ZIEMER:** Is this something the Board in  
15          general would like to hear? Appears to be  
16          consensus that -- should do that at a future  
17          meeting, get that on the agenda --

18          **MR. ELLIOTT:** I think it's also important and -  
19          - and an obligation that we have when we --  
20          when Dr. Neton presents or others -- you know,  
21          staff present an evaluation report, to speak to  
22          this matter --

23          **MR. GRIFFON:** Right.

24          **MR. ELLIOTT:** -- as well and, you know, perhaps  
25          even that should be one of the dose

1 reconstruction examples that -- that we may  
2 need to provide.

3 **DR. ZIEMER:** Yeah, yeah. Mark?

4 **MR. GRIFFON:** I mean just -- just to understand  
5 the -- the point further, I -- I mean these end  
6 up being what I would call partial dose  
7 reconstructions, so are -- are they used, for  
8 these non-presumptive cancers, for -- for both  
9 approvals and denials?

10 **MR. ELLIOTT:** Yes.

11 **MR. GRIFFON:** Or have you gotten that far --  
12 yeah.

13 **MR. ELLIOTT:** Yes, unfortunately they are what  
14 we call a partial dose reconstruction, and if  
15 they -- if the cancer is of a type that we have  
16 enough dose to -- you know, we do dose  
17 reconstruction, as you know, to the organ of  
18 concern, the organ where the cancer either  
19 originated or if it's a secondary we have a  
20 list of likely primaries, and so we reconstruct  
21 dose to that particular tissue or organ. Skin  
22 cancer, if there's enough external dose, we've  
23 seen a number of skin cancer cases become  
24 compensable. Other types of cancer -- prostate  
25 cancer -- that's not on the list of 22 where we

1 don't have enough dose, yes, we do a partial  
2 dose reconstruction and then come out as a  
3 denied comp case, but we've given it all we can  
4 give.

5 **MR. GRIFFON:** Right, I just wanted to clarify  
6 that.

7 **DR. ZIEMER:** Thank you.

8 **MR. ELLIOTT:** Thank you for that question --

9 **DR. ZIEMER:** Okay, we need to move ahead here.  
10 We -- we actually --

11 **DR. MELIUS:** Can -- can -- can I just --

12 **DR. ZIEMER:** Jim.

13 **DR. MELIUS:** -- follow up with a -- I would  
14 respectfully request that we have this  
15 presentation at our next meeting. We will be  
16 in Washington, since -- which is I believe  
17 where we're scheduled to be, and that's where  
18 this law was written and where this -- these  
19 criteria on SEC versus non-SEC were -- were put  
20 together and I -- we've actually -- at least  
21 I've been requesting this for -- some  
22 discussion of this for a while, so I really  
23 would like to get it on the record.

24 **MR. ELLIOTT:** Certainly, and I think we'll have  
25 a goodly number of classes --



1 DR. MELIUS: Yes, yes.

2 MR. ELLIOTT: -- to provide you --

3 DR. MELIUS: Yeah.

4 DR. ZIEMER: So noted. Okay.

5 DR. MELIUS: Thank you.

6 AMES SEC TASK UPDATE

7 DR. ZIEMER: We want to get updates on the SC&A  
8 SEC tasks, and we've got not only the  
9 procedures but Ames, Rocky Flats and Y-12.

10 These are just updates on the tasks. These are  
11 -- I see some handouts, and --

12 DR. WADE: We have Ames and we have Rocky --

13 DR. ZIEMER: -- I want to -- I want to give  
14 SC&A a heads-up that we're going to adjourn at  
15 5:15, so you -- time yourselves accordingly.  
16 At least the Chair is leaving. I'm not sure  
17 about the rest of you.

18 DR. MELIUS: Okay. Can I just make a couple of  
19 introductory remarks --

20 DR. ZIEMER: You may.

21 DR. MELIUS: -- on Ames, that I think you're  
22 doing first. Is that -- Hans? Yeah, yeah,  
23 just to indicate we -- our workgroup meeting  
24 what, two or three weeks ago, was scheduled  
25 with some expectation that the Ames evaluation

1 report would be in our hands the previous week.  
2 It turns out there -- other reports were ahead  
3 of it and so we -- we received it I believe a  
4 day before or the night before our -- our  
5 meeting, so no one really had had time to  
6 review it and whatever. We did have some  
7 discussion, the -- some of the petitioners were  
8 on -- on the phone so we had some back and  
9 forth with them on -- on particular issues and  
10 -- and so forth and I think, having glanced  
11 through the slides that Hans is presenting, I  
12 think that addresses some of the issues they  
13 raised, also. So -- but I think it's -- prior  
14 to that, SC&A had done some work and I think  
15 they'd been able to do a little bit more work  
16 based on the evaluation part but we never  
17 really had time for any sort of workgroup  
18 closure on this or for full discussion.

19 **DR. ZIEMER:** Thank you. Hans?

20 **DR. BEHLING:** How much time do I have?

21 **DR. ZIEMER:** You have a total of a half-hour  
22 amongst your group. You can apportion it.

23 **DR. BEHLING:** Thank you, John. Anyway, this is  
24 a Phase I review, as Dr. has already pointed  
25 out. It's a cursory or preliminary review, and

1 I was asked by Arjun to make one corrective  
2 statement. It's not 200 hours, John, but only  
3 130, so fewer hours than even John had  
4 identified.

5 Let me just briefly talk about two things.  
6 Purpose and scope, our objective here was to do  
7 a brief or preliminary assessment of the  
8 quality and completeness of data associated not  
9 only with worker monitoring, such as external  
10 and internal exposure monitoring and survey  
11 data, but also with the understanding of the  
12 types of radionuclides that people were exposed  
13 to, their chemical and physical properties,  
14 their quantities that define their source terms  
15 and the various processes that took place that  
16 would have potentially created certain  
17 radiological environments.

18 Let me briefly identify a few of the data  
19 sources that we looked at. Obviously we looked  
20 at the SEC petition itself and its support  
21 documents or attachments, among which was a  
22 250-page PhD thesis which provided an  
23 incredible amount of background information and  
24 anecdotal data that we found very interesting.  
25 In addition to that we also looked at NIOSH's

1 site research query and identified about 30  
2 documents that we felt were relevant to the  
3 issue of this review. Also SC&C -- SC&A held  
4 discussions with the petitioners, namely Dr.  
5 Laurence Fuortes, and also with one of the site  
6 experts by the name of Dr. James Worth\*, who  
7 was a chemist at the time during the period of  
8 question, and he worked specifically in Pu  
9 separation.

10 Let me briefly talk also about the principal  
11 facility operation since there's no TBD  
12 available that you may have had a chance to  
13 read and the process at Ames for those who may  
14 not be familiar. The program at Ames really  
15 started out as a metallurgical research  
16 facility that had its intention of producing  
17 very pure, high-quality uranium and thorium.  
18 Well, as it turned out, they went beyond that  
19 and actually went into large scale production  
20 and so starting in 1942 you had some uranium  
21 work done that -- that was -- started out in  
22 terms of metallurgical bench level research  
23 that ultimately translated into large scale  
24 production. And the -- there was three basic  
25 processes. The first one was really the metal

1 production, taking uranium oxide, uranium  
2 fluoride and converting them into pure metal,  
3 and that was a very, very difficult task that  
4 was unknown at the time, and there were two  
5 processes for reducing these metal -- uranium  
6 metal oxides that grow as -- by way of calcium  
7 magnesium reduction and -- and we'll talk a  
8 little bit about that because they were very  
9 unique and -- and they were very dangerous  
10 processes because of their highly exothermic  
11 nature.

12 The second one was metal casting, so once you  
13 have your purified uranium, you obviously  
14 wanted to put them into ingots that meant  
15 melting the material in crucibles and putting  
16 them into ingots. And the third one was really  
17 -- also in addition to casting, I'll just  
18 quickly mention, was the certain amount of  
19 machining of those ingots.

20 And lastly there was the issue of uranium  
21 recovery. Early in the '40s there was desired  
22 by the Manhattan Engineering District to also  
23 recover uranium and in total, all -- from all  
24 the facilities combined, the Ames Laboratory  
25 recovered about 600,000 pounds of uranium in

1           that process.

2           The thorium process was pretty much a parallel.  
3           Again it was aimed at producing a pure thorium  
4           metal because the interest was one of using  
5           thorium-232 to produce uranium-233 because it's  
6           a very fissile material, and so pretty much a  
7           parallel path was conducted there in terms of  
8           metal production and metal casting. And I'll  
9           just give you a brief overview of some of the -  
10          - the quantities.

11          For the uranium -- as a starting point in 1942  
12          their production was limited to making one  
13          kilogram to five kilogram ingots. By January  
14          1943 production rose to 300 to 3,600 to 5,600  
15          pounds per week. And in the peak per-- period  
16          of production, which turned out to be July  
17          1943, 130 pounds of uranium -- pure uranium was  
18          produced in a single month. And in total about  
19          2 million pounds of uranium -- pure uranium was  
20          processed during the period of '42 through '45.  
21          For thorium, the quantity -- the total quantity  
22          of purified thorium that was produced was 65  
23          tons of it, so there were -- we're talking  
24          about very large quantities of both uranium and  
25          thorium that were produced.

1           In addition to -- to the actual production  
2           there were also other research activities that  
3           -- chemical and physical property studies of  
4           uranium and thorium and plutonium.

5           You can go to the next slide.

6           The next slide has just some -- some basic  
7           review of the radiological environments and  
8           potential pathways of exposure. As -- as I  
9           just mentioned to you, just as a background, we  
10          were talking about large quantities of uranium  
11          and thorium that were processed. In addition  
12          to -- to that, we're talking about a facility  
13          at Ames that was never really designed to deal  
14          with such materials and in such large  
15          quantities. They were certainly not equipped  
16          to handle material that were airborne material  
17          because the ventilation systems, hoods and so  
18          forth, they were not really prepared to do --  
19          to deal with those things.

20          In addition, these -- this was in the early  
21          '40s when the maturity of health physics was  
22          clearly in its infancy stages so a lot of  
23          things that we know now today about uranium and  
24          thorium were not understood. In fact, in those  
25          days their concern was more about the chemical

1 toxicity of uranium than its radiotoxicity.  
2 The radiological pathways were clearly  
3 obviously the -- dominated by internal exposure  
4 based upon the airborne environments,  
5 inhalation, ingestion and also potentially  
6 wounds and abrasions due to certain incidents,  
7 including bomb explosions where injuries and  
8 abrasions were quite common. For external  
9 exposure clearly we have a certain  
10 radionuclides that are gamma emitters, we have  
11 beta emitters and we also have neutrons with  
12 the N-alpha\* reaction, so we have basically a  
13 primary concern for internal exposure and also  
14 an external exposure. As I've already  
15 mentioned, the concern was also one of episodic  
16 events that to the nature of the reduction  
17 processes of uranium and thorium and using  
18 various materials that were highly reactive and  
19 reached temperatures on the order of about  
20 2,000 degrees Celsius and frequently reaction  
21 that led to an explosion and of course the  
22 creation of large airborne environments,  
23 contamination, et cetera.  
24 Let me go quickly and go to the next slide,  
25 which really talks about the summary of



1           available monitoring data. Given the types of  
2           processes, the materials, the quantities, the  
3           radiological environments that they created, it  
4           would almost be imperative that in order for us  
5           to have a complete assessment for internal and  
6           external exposures that we would be in a  
7           position to say there are large quantities of  
8           bioassay data and complete comprehensive  
9           external monitoring data available. Well, our  
10          review showed the following, and these are just  
11          summary slides. I'll just quickly scan through  
12          them because of the time involved.

13         It's important to note that essentially no  
14         monitoring for external radiation took place  
15         with regard to uranium prior to -- well,  
16         actually none at all. I think there were a  
17         couple -- I saw a couple of documents that had  
18         some film data, but it was basically dismissed  
19         because the film was not calibrated , so in  
20         essence for uranium exposure there is no  
21         external monitoring data. And there's only a  
22         small number of workers who were assessed very  
23         episodically for -- by -- by urinary analysis  
24         for uranium, and -- and again the numbers of  
25         workers were in the -- a couple of dozen of the

1 workers or so. And what you do see were also  
2 bioassay samples involving blood, and here the  
3 assessment was not necessarily directed towards  
4 the actual assessment of the radioactivity, but  
5 was the assessment of the dysfunction of kidney  
6 and liver. They were looking at various things  
7 such as sugar, albumin, total niacin and other  
8 things, so even that sparse data is complicated  
9 by data that is questionable in terms of our  
10 usage.

11 Let me go to -- quickly to the next slide and  
12 briefly discuss -- discuss the thorium  
13 monitoring data. Again, if you look at the  
14 columns there, there -- our preliminary  
15 research found that there were no external  
16 monitoring data before 1952. That's the  
17 beginning of a few monitoring of personnel for  
18 external exposure, and no bioassay external  
19 monitoring before 1952. Thereafter there was a  
20 limited amount of external exposure monitoring,  
21 and also some bioassay data available.

22 Perhaps the most informative piece of data that  
23 I found was a comprehensive survey -- a three-  
24 day survey conducted on March 18 through 21,  
25 1952, and that data was fairly well done. It

1 provided information on breathing air  
2 concentrations for thorium. It provided  
3 information on contamination levels, surface  
4 contamination levels, both fixed and smearable,  
5 and also provided dose rates in terms of  
6 ambient dose rates defined. That was probably  
7 the most detailed information that I found  
8 available. Also there was some additional data  
9 on bioassay, as I mentioned, but by and large  
10 the data was very sparse.

11 With regard to a -- the -- another category --  
12 plutonium and fission products, which were  
13 there in smaller quantities, there are no  
14 monitoring data that I've found available for  
15 discussing the exposure of personnel to  
16 plutonium and fission product.

17 The last slide, let me just summarize it. Our  
18 conclusions with regard to this preliminary  
19 use, that there was a very sparse amount of --  
20 insufficient amount of personal monitoring data  
21 for both internal and external. There was a  
22 very limited amount of air monitoring data. As  
23 I said, the most informative was 1952 survey  
24 data. That was a 3-day survey, but again that  
25 was only a moment in time.

1           There was also a question of the difficulty  
2           interpreting some of the available bioassay  
3           data, and frankly I found some that were  
4           probably from -- from reproduced microfiche  
5           that I couldn't even decipher. I don't know  
6           what the units of measurement were, and we  
7           certainly don't understand some of the  
8           bioassays that were used with -- the actual  
9           physical methods by which these data were  
10          derived, so there's a question of -- of the  
11          data integrity and the pedigree of that data.  
12          And of course very important here in this case,  
13          it's already been alluded to, was the issue of  
14          how do you account for radiological events  
15          which happened as routine measure. In fact, in  
16          one of the documents -- several documents --  
17          there was reference to a single day in which  
18          six bombs exploded and there was even some sort  
19          of description as to how that happened, how it  
20          blew out whole wall panels and people  
21          staggering around and so forth, so you can kind  
22          of in your own mind imagine the kind of  
23          radiological conditions that we would have to  
24          have data for in order to do a comprehensive  
25          evaluation of work exposures to these very

1 episodic events.

2 And lastly there was no data on plutonium and  
3 fission products that I could find that would  
4 allow us to do any kind of dose reconstruction.  
5 I'll go to the very last slide, and this was  
6 preliminary assessment really done by myself  
7 and -- and Arjun and at this point I guess  
8 we'll -- they seem to have some more focused  
9 issues that the Board will ask us to look at,  
10 so I hope that I didn't run too fast here,  
11 but...

12 **DR. ZIEMER:** Thank you very much. I need to  
13 ask Lew, and then maybe Jim can also comment,  
14 but action-wise what is needed on this? We're  
15 not quite ready to take final action.

16 **DR. MELIUS:** But -- could I --

17 **DR. WADE:** Go ahead.

18 **DR. MELIUS:** Lew and I have discussed this.  
19 Larry's been part of the discussion. For --  
20 given our other workload and where -- where we  
21 were, NIOSH had planned on presenting their  
22 Ames evaluation report at our next meeting,  
23 which would have been the -- the June meeting.  
24 We actually discussed that on the conference  
25 call with the -- the petitioners, and

1 particularly given the issue of the acute  
2 events which they had -- explosions and so  
3 forth which they had raised in their petition,  
4 and given that they had also just seen the  
5 evaluation report the night before or whatever,  
6 the -- they seemed satisfied with that, though  
7 I did get a call Friday from -- from one of the  
8 petitioners saying can you change that and move  
9 -- move it up and what I would -- Lew and I  
10 talked about that and I think Lew -- I don't --  
11 **DR. WADE:** I spoke to the petitioner. I think  
12 he's comfortable with what we're doing.

13 **DR. MELIUS:** What -- what we're doing and so  
14 forth, and -- and I actually think the next  
15 step we need to take as a Board is the  
16 workgroup, which is the SEC guidelines  
17 workgroup has got the task of dealing with  
18 Ames. We need to talk among ourselves as to do  
19 we need to have SC&A do anything more and --  
20 and then -- then deal with it based on that,  
21 then we can make a recommendation to Lew about  
22 scheduling and so forth with that.

23 **DR. ZIEMER:** So --

24 **DR. MELIUS:** I think the --

25 **DR. ZIEMER:** -- the bottom line is this would

1           probably be on our agenda for action at the  
2           next meeting then.

3           **DR. MELIUS:** Next meeting. I think there's  
4           some question whether we may want to try to  
5           deal with it as part of a conference call  
6           rather than do it -- that. I think it's  
7           relatively straightforward, but --

8           **DR. ZIEMER:** Yeah.

9           **DR. MELIUS:** -- let's talk among ourselves.

10          **DR. ZIEMER:** Right.

11          **DR. WADE:** Right, just -- I mean we had  
12          originally asked SC&A to do a -- a total review  
13          of the Ames petition. I think the  
14          recommendation now is to focus on one or two  
15          issues, one issue possibly being the 250 days  
16          and the occurrence of criticality events, and  
17          to do their work in a way that would inform the  
18          Board before the Board would vote on Ames in --  
19          in June.

20          **DR. ZIEMER:** Right. Thank you.

21          **DR. MELIUS:** And can I -- just one piece of  
22          factual information. NIOSH did a quick check  
23          during our call about the -- given the -- a  
24          number of people already filed for dose  
25          reconstruction. I believe out of what, 40 or

1           50, only -- there was one person that had  
2           worked there less than 250 days that they were  
3           aware of now. So given the nature of the  
4           facility and so forth, I think it probably  
5           makes -- makes sense and so forth, but we  
6           should keep that in mind also.

7           **DR. ZIEMER:** Okay, thank you. Next we'll hear  
8           the Y-12 SEC evaluation report and Ar--

9           **DR. MAKHIJANI:** Is that what you want, Dr.  
10          Ziemer, Y-12 or Rocky?

11          **DR. ZIEMER:** Well, we have both on the agenda.  
12          You -- what you're telling me is you probably  
13          can't get them both in today.

14          **DR. MAKHIJANI:** In ten minutes?  
15          (Whereupon, Dr. Ziemer, Dr. Wade and a number  
16          of Board members discussed how to proceed in  
17          the time remaining.)

18          **DR. ZIEMER:** The suggestion is that we include  
19          these discussions at the appropriate time when  
20          we discuss both of those sites tomorrow. In  
21          other words --

22          **DR. WADE:** So we would try to do Y-12 tomorrow  
23          --

24          **DR. ZIEMER:** -- in addi--

25          **DR. WADE:** -- and Rocky Flats, either tomorrow



1 or Thursday morning.

2 **DR. ZIEMER:** That way we'll have a little more  
3 time for more in-depth discussion on both of  
4 these, which is very important. Is there any  
5 objection, Board members, to that?

6 (No audible objections.)

7 Okay, then -- any -- any -- oh, Arjun, did you  
8 have a question then?

9 **DR. MAKHIJANI:** So no presentation right now?

10 **DR. ZIEMER:** Right. Any other -- I --  
11 housekeeping items, Lew, that we need to  
12 address today?

13 **DR. MELIUS:** I just have -- well, one question.  
14 You may have addressed it already; I was late.  
15 Other than public comment period tomorrow  
16 evening, I don't see any public comment period  
17 scheduled. Have we --

18 **DR. WADE:** Just tomorrow.

19 **DR. MELIUS:** That's it?

20 **DR. WADE:** Uh-huh.

21 **DR. MELIUS:** I would argue that we ought to be  
22 a little bit more flexible on that than --

23 **DR. ZIEMER:** We could probably add one for  
24 Thursday, if necessary.

25 **DR. MELIUS:** -- Thursday or -- or -- you know,

1           if there are people -- again, if people have --  
2           that come during the daytime don't want to have  
3           to stay for evening, I think they should be  
4           allowed.

5           **DR. ZIEMER:** Yeah. Okay.

6           **DR. MELIUS:** Or people not speaking directly to  
7           the --

8           **DR. ZIEMER:** Right. Certainly we'll add it to  
9           the -- can we add it to the Thursday maybe --

10          **DR. WADE:** Sure.

11          **DR. ZIEMER:** We'll add that. Okay, then we  
12          will recess until tomorrow morning at 8:30.

13          (Whereupon, the day's session adjourned at 5:15  
14          p.m.)

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**CERTIFICATE OF COURT REPORTER****STATE OF GEORGIA****COUNTY OF FULTON**

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of April 25, 2006; and it is a true and accurate transcript of the testimony captioned herein.

I further certify that I am neither kin nor counsel to any of the parties herein, nor have any interest in the cause named herein.

WITNESS my hand and official seal this the 26th day of May, 2006.

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**STEVEN RAY GREEN, CCR****CERTIFIED MERIT COURT REPORTER****CERTIFICATE NUMBER: A-2102**